

19970929.qrp v00_n863.qrs.970929

Date: Mon, 29 Sep 1997 19:03:14 EDT
From: qrp-l@Lehigh.EDU
To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>
Subject: QRP-L digest 863

QRP-L Digest 863

Topics covered in this issue include:

- 1) [27610] FOX sked on WWW
by "Rich Dailey, KA8OKH" <ka8okh@som-uky.campus.mci.net>
- 2) [27611] Solar Storm fizzles
by Paul Harden <pharden@aoc.nrao.edu>
- 3) [27612] O-SCOPES: Introduction
by Paul Harden <pharden@aoc.nrao.edu>
- 4) [27613] O-SCOPES: PART 1
by Paul Harden <pharden@aoc.nrao.edu>
- 5) [27614] O-SCOPES: PART 2
by Paul Harden <pharden@aoc.nrao.edu>
- 6) [27615] O-SCOPES: PART 3
by Paul Harden <pharden@aoc.nrao.edu>
- 7) [27616] O-SCOPES: PART 4
by Paul Harden <pharden@aoc.nrao.edu>
- 8) [27617] Re: Solar Storm fizzles
by "Paul R. Valko" <prvalko@Oakland.edu>
- 9) [27618] Re: MFJ-9420
by "Kevin F. Glynn" <kfglynn@prodigy.net>
- 10) [27619] MFJ-9420 Output Power
by "Kevin F. Glynn" <kfglynn@prodigy.net>
- 11) [27620] Re: WA3NNA/B Propagation Test
by pthomson@bruderhof.com
- 12) [27621] FT-301S info?, TAC-1 WTB
by "Kelly Ellison" <kelman@dialnet.net>
- 13) [27622] KH6AQ freq on 14025.5
by Jess Gypin <jessqrp@concentric.net>
- 14) [27623] KH6AQ big sig on 20 meters right now 01:50 9/29
by Jess Gypin <jessqrp@concentric.net>
- 15) [27624] Canadian QRP Award
by "L. Jeffrey Hetherington" <jhetheri@freenet.npiec.on.ca>
- 16) [27625] Looking for an Argonaut II
by LynnSimons@aol.com
- 17) [27626] collins list
by Scott Bauer <ke3nv@erols.com>
- 18) [27627] RE: Old G3RJV Reviews of JOY OF QRP
by Adrian Weiss <aweiss@sunflowr.usd.edu>
- 19) [27628] FS- V22, NIR12, AT-11, etc.

- by Charles Kadesch <chas@digizen.net>
- 20) [27629] Re: Old G3RJV Revies of JOY OF QRP
by Brian Kassel <bkassel@dancris.com>
- 21) [27630] Re: WA3NNA/B Propagation Test
by Bob Patten <n4bp@shadow.net>
- 22) [27631] Oops
by ke3fl@juno.com
- 23) [27632] Collins List found, thank you
by Scott Bauer <ke3nv@erols.com>
- 24) [27633] The K8 Keyer...I love it!..
by Gary M - W2UX <MAIL4GARY@worldnet.att.net>
- 25) [27634] Re: The K8 Keyer...I love it!..
by N4JS <n4js@amsat.org>
- 26) [27635] Aussie QRP Club
by John Bates <batesjw@netspace.net.au>
- 27) [27636] FS
by John Dorson <jdorson@bbs.mpcs.com>
- 28) [27637] Re: EPA QRP Club
by dzn1@juno.com (Howard D Rubin)
- 29) [27638] Looking for Heath HW-7/HW-8
by wb0nzm@juno.com (John F Rayfield)
- 30) [27639] MFJ-9420 -Reply
by Paul Cereste <cereste@myapc.com>
- 31) [27640] self-contained portable paddles
by "Jeff M. Gold" <jmg@tntech.edu>
- 32) [27641] Tick II-K1EL
by "Jeff M. Gold" <jmg@tntech.edu>
- 33) [27642] CONTESTING - TNX
by kreinbd@ccgate.dl.nec.com (David Kreinberg)
- 34) [27643] Re: MFJ-9420 -Reply
by "Kevin F. Glynn" <kfglynn@prodigy.net>
- 35) [27644] VK3 piling into W3-land this morning on 30m
by "Scott Rosenfeld [NF3I]" <ham@w3eax.umd.edu>
- 36) [27645] American States Electronics Mini-Mitter II
by David Feldman <dgf@netcom.com>
- 37) [27646] Telegraphic Codes
by Ken Lopez <kjlopez@earthlink.net>
- 38) [27647] Bench safety
by rerobins@unccvm.uncc.edu (Rick Robinson)
- 39) [27648] Thanks
by w8lrm@juno.com (Albert K. Rea)
- 40) [27649] Re: AB7TT Attacked by Javelinas, Fox Escapes
by "Michael A. Gipe" <mgipe@reliablemeters.com>
- 41) [27650] Maryland Milliwatts callsign
by "Scott Rosenfeld [NF3I]" <ham@w3eax.umd.edu>
- 42) [27651] Bench Safety
by Ken Freedman <n1qqv@cshore.com>
- 43) [27652] qsl.net server down or something.

by Ed Loranger <we6w@qsl.net>
44) [27653] Md Milliwatts
by "Scott Rosenfeld [NF3I]" <ham@w3eax.umd.edu>
45) [27654] Kansas Flea Market/ ARRL Convention
by "Bruce Barley" <lbbarley@feist.com>
46) [27655] Re: qsl.net server down or something.
by John Evans - N0HJ <jaevans@codenet.net>
47) [27656] Re: Bench safety
by Erin Scott KK7GE <ekscott@ibm.net>
48) [27657] Option on K1EL K8 keyer.
by Harvey Hetland <n6mm@earthlink.net>
49) [27658] Re: Maryland Milliwatts callsign
by Joe Gervais <vole@primenet.com>
50) [27659] Tick II-K1EL
by "Watson R Gabriel Jr" <wgabriel@duke-energy.com>
51) [27660] Silver contacts about to ship out
by Jim W7LS <w7ls@brigadoon.com>
52) [27661] jewelry & electronics
by Ed Tanton <n4xy@bellsouth.net>
53) [27662] Option on K1EL K8 keyer. (2nd try)
by Harvey Hetland <n6mm@earthlink.net>
54) [27663] Re: Bench Safety
by Monte Stark <ku7y@sage.dri.edu>
55) [27664] Re: Option on K1EL K8 keyer. (2nd try)
by Chris Cartwright <ccart@dns.vidtel.com>
56) [27665] origional morse code?
by BWHITTEM@mailgw.sanders.lmco.com
57) [27666] Re: Bench Safety
by Chris Cartwright <ccart@dns.vidtel.com>
58) [27667] Norcal 40-9er
by dwayne rich <drihff@worldnet.att.net>
59) [27668] Dod you receive 38 special case yet?
by dgf@netcom.com (David Feldman)
60) [27669] attached files
by rerobins@unccvm.uncc.edu (Rick Robinson)
61) [27670] Pre-FOXHUNT EXERCISE
by adams@chuck.dallas.sgi.com (Chuck Adams)
62) [27671] LIQRP in the Park, etc.
by Nick Franco <kf2ph@bnl.gov>
63) [27672] Re: Oops
by "Bob Kellogg" <ae4ic@nr.infi.net>
64) [27673] Re: Bench Safety
by "Phil, K6LS" <k6ls@amsat.org>
65) [27674] Re: O-SCOPES / Paul Harden
by "Phil, K6LS" <k6ls@amsat.org>

Date: Sun, 28 Sep 1997 22:56:11 -0400
From: "Rich Dailey, KA8OKH" <ka8okh@som-uky.campus.mci.net>
To: qrp-1@LEHIGH.EDU
Subject: [27610] FOX sked on WWW
Message-ID: <3.0.16.19970928225606.23ef4c1a@som-uky.campus.mci.net>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

KI7MN has an excellent schedule table at -

<http://www.dancris.com/~ki7mn/foxlist.htm>

so I won't duplicate this information.
72...rich

Rich Dailey, KA8OKH <ka8okh@som-uky.campus.mci.net>
The KA8OKH / KB4NPI Web - <http://www.qsl.net/ka8okh>

Date: Sun, 28 Sep 1997 17:33:13 -0600
From: Paul Harden <pharden@aoc.nrao.edu>
To: qrp-1@LEHIGH.EDU
Subject: [27611] Solar Storm fizzles
Message-ID: <199709282333.RAA15727@zia.aoc.nrao.edu>

The latest report on the the solar and geomagnetic conditions state that from solar wind data over the past 24 hours, there is no indication that the electrical shock wave from last weeks disturbance has hit the Earth. Most likely this is due to the trajectory of the outburst missing the Earth altogether. Only brief minor storming periods have been observed. The increasing flux from the main event has however caused good propagation, but the absence of the shock wave means no storming, no static bursts, and generally good conditions.

We lucked out on this one.

72, Paul NA5N

Date: Sun, 28 Sep 1997 17:43:27 -0600
From: Paul Harden <pharden@aoc.nrao.edu>
To: qrp-l@Lehigh.EDU
Subject: [27612] O-SCOPES: Introduction
Message-ID: <199709282343.RAA15961@zia.aoc.nrao.edu>

OSCILLOSCOPES - BASIC USE AND MEASUREMENTS by Paul Harden, NA5N

INTRODUCTION

To follow are the text versions of an article I wrote for the Summer 1997 issue of NorCal's "QRPP," entitled "Oscilloscopes (Part 1)". The article contains numerous illustrations and photos of oscilloscope displays, which unfortunately can not be included in this text file. "Oscilloscopes (Part 2)" will appear in the Winter 1997 "QRPP," and I'll make it a continuation of this text file series at that time.

THE QRP-L TEXT FILES ... have been broken down into 4 text files for posting to QRP-L and to make the files a bit more manageable by keeping them less than 10K each, which contain:

O-SCOPES PART 1: Basic oscscope description, calibration and controls
O-SCOPES PART 2: Measurements: DC and AC voltages; time and frequency
O-SCOPES PART 3: Measurements: Amplifier gain and Insertion Loss
O-SCOPES PART 4: Measurements: Phase shifts and delays

There are real-world QRP examples following each measurement topic, of which most can be done with a limited bandwidth scope. The text has been altered slightly from the original article to compensate for the lack of illustrations. Hopefully you'll find these informative and useful in learning how to better use your oscilloscope.

IN PART 2 of the QRPP article, and the subsequent QRP-L Text Files, I'll PROBE (bad pun) into some advanced measurement techniques, even with a simple scope, such as measuring sideband rejection, tuned circuits, filter responses, group delays, VCO phase noise, etc. (and what it all means). I would guess that will be posted around January 1997 (I haven't written it yet for QRPP!)

PACIFICON ... For those attending the NorCal QRP Forum at PacifiCon October 17-19, 1997 (TDO - Three Days in October?) ... I'll be discussing much of this in my presentation, where I'll go through many basic test and alignment procedures on a QRP rig using only a DVM and an oscilloscope. Learn how to check sideband rejection, filter bandwidth and shape, etc. with only a DVM ... and even more gooder if

you have a scope. And if you have a portable scope you need help with, or doubt the calibration, bring it along and I'll give you a hand with it saturday night during the building contest and general goof-off time, errr, I mean hospitality session.

72, Paul Harden, NA5N
NA5N@Rt66.com

Date: Sun, 28 Sep 1997 17:47:04 -0600
From: Paul Harden <pharden@aoc.nrao.edu>
To: qrp-1@LEHIGH.EDU
Subject: [27613] O-SCOPES: PART 1
Message-ID: <199709282347.RAA15995@zia.aoc.nrao.edu>

OSCILLOSCOPES - BASIC USE AND MEASUREMENTS
by Paul Harden, NA5N

PART 1 - BASIC DESCRIPTION, CALIBRATION AND CONTROLS

NOTE: This is a text version of an article appearing in the Summer 1997 issue of "QRPP." The article contains numerous illustrations and photos of oscilloscopes displays, which unfortunately can not be included in a text file.

GENERAL O-SCOPE DESCRIPTION.

THE VERTICAL INPUT is applied to the vertical input amplifier, which is quite sensitive, designed for a 25-50mV input. For larger inputs, the signal is routed through attenuators comprised of simple voltage dividers. These attenuator dividers is what forms the VERTICAL SENSITIVITY, calibrated in mV/division or V/div. An INPUT COUPLING switch selects DC or AC coupling, and sometimes a GROUND position. The output of the vertical input amplifiers is a differential signal, amplified up to high voltages and applied to the CRT (cathode ray tube) vertical plates for deflecting the beam in the vertical axis.

THE HORIZONTAL AMPLIFIERS are driven by an internal sweep generator, amplified to a high voltage and applied to the CRT horizontal plates for deflecting the beam in the horizontal axis ... that is, the sweep that moves the beam from left-to-right.

Thus, for a proper oscilloscope display, such as displaying a sine wave, it is a combination of moving the trace from left to right to show TIME, and up-and-down to show MAGNITUDE.

THE SWEEP GENERATOR is a constant current source charging a capacitor to make a linear sawtooth waveform. The value of the capacitor will determine the time it takes to eventually move the beam across the screen, and is selected by the HORIZONTAL SWEEP control, calibrated in seconds, mS, μ S (or nS) per division. The faster the beam moves across the screen, the higher the frequency that can be displayed. An important task of a scope is to display a stable waveform, which is done by starting the sawtooth sweep at exactly the same time in respect to the input signal. A switch labeled TRIGGER SOURCE determines what initiates the sweep. In the INTERNAL position, a sample of the input signal from the vertical amplifiers is used, and when it reaches a certain level, WOOSH, the sweep occurs. In the AUTO mode, the sweep is free running and not necessarily synchronized with the input signal. In LINE position, the sweep is triggered off of 60-Hz from the power supply (useful for synchronizing to TV/VCR signals), and EXTERNAL the sweep is triggered from an external input applied to a BNC (on the front or the back of the scope).

OTHER FEATURES your scope may have are:

- * Two vertical input channels for dual-trace operation
- * Two separate time bases for delayed sweep operation
- * Various modes to display the input signals (alternate, chopped, A+B added, invert B, A intensified by B, etc.)
- * Built in calibrators

CALIBRATING YOUR SCOPE.

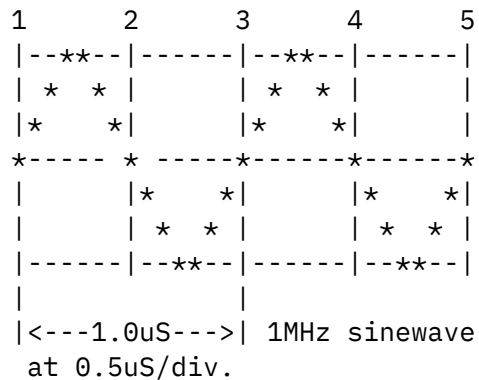
Likely, you obtained your scope from a hamfest, the company junk bin, etc. The first thing you should do upon acquiring a scope is to check its calibration.

THE VERTICAL AMPLIFIERS can be checked with a known voltage source, such as a 9v battery. Measure the battery output with an accurate voltmeter. Let's say it's exactly 9v. Set the input coupling to the GND position (0v) and move the trace to the bottom division. Switch the input coupling to DC and set the attenuators to 2v or 5v/div. to give a nearly full scale deflection. For example, if your scope has four vertical divisions, setting the attenuators to 2v/div. would be 8V full scale deflection, and at 5v/div., full-scale would be 20V. With the 9v battery applied, the DC deflection should be 1.8 divisions at 5v/div. Switching to 10v/div., the deflection should be just a bit less than one division. Internal to the scope (or perhaps accessible from the outside) are adjustments for the VERTICAL AMPLIFIER GAIN. Adjust this pot for the proper deflection described above. The procedure can be repeated with a 1.5v battery for the lower sensitivity ranges

(which you'll be using more of the time anyway).

Also note that when you adjust the Vertical Amplifier Gain adjustment, the 0v (ground) reference on the bottom division may also shift. So after each adjustment, reposition the trace on the bottom division for 0V input, then recheck the trace position for the 9V or other test voltage you are using to calibrate against. It takes a few times going back and forth to get it right.

THE HORIZONTAL AMPLIFIERS should be checked/calibrated using a signal generator. For example, a 1 MHz signal has a period of 1uS per cycle. Setting the SWEEP RATE to 1.0uS/div., a 1 MHz signal should take EXACTLY one division per cycle. Ensure the horizontal WIDTH control is set so the beam starts at the first division and ends on the last one, and the HOR SWEEP VERNIER (fine adjustment) is in the OFF or CAL position. If the sweep rate appears incorrect, an internal SWEEP GAIN ADJustment can be set for proper display of the test signal. This should be repeated at different frequencies, and some scopes will have a separate adjustment for each time base setting. Once the Sweep Gain has been set as above for 1MHz = 1 cycle per division, go to the next faster sweep speed, which should usually be 0.5uS/div. In this case, the 1MHz sinewave should take TWO divisions to display a complete cycle, as shown in the quasi-illustration to the right. Trigger the scope for a stable display so that the zero crossings or the peaks are on the vertical graticle lines. The illustration shows the positive going "zero-crossings" occurring on the vertical graticles labeled "1" - "3" - "5".



For proper zero-crossings, the waveform should be centered between two divisions, also as shown in the illustration.

If you can't find the adjustment to tweak the horizontal gain, you can shrink or stretch out the test signal to the desired divisions using the HORIZONTAL WIDTH control, usually a front panel control. Then you can mark on the front panel where the HOR WIDTH control must be at each SWEEP setting for proper calibration.

Without checking and calibrating the accuracy of your time base sweep, time and frequency measurements performed on your scope may contain significant errors.

If you don't have a signal generator, you might use the audio from a receiver tuned to WWV. The various tones transmitted throughout the

minute and hour are listed in various references. And of course, there's always 60-cycles floating around the ham shack somewhere!

MAIN OPERATOR CONTROLS.

INTENSITY - controls the brightness of the beam. Adjust for a clear trace, but not too bright. A very bright trace can cause permanent damage to the CRT, particularly on a well-used scope.

FOCUS - adjusts the beam for the thinnest and sharpest display.

VERT & HOR POSITION controls the vertical and horizontal position of the trace.

VERT VOLTS/DIV - controls the vertical sensitivity of the display, i.e., how many volts or mV per division.

VERT VERNIER - adjust the vertical sensitivity in fine steps. Should be off (or CAL position) for calibrated measurements.

TIME BASE/HOR SWEEP SPEED - sets the horizontal sensitivity, i.e., how many second, mS or uS per division.

HOR VERNIER - adjusts the horizontal sensitivity, or sweep speed, in fine steps. Should be in OFF or CAL for calibrated measurements.

OTHER ADJUSTMENTS YOU MAY FIND:

ASTIGMATISM - With the scope INTENSITY and FOCUS properly set, this adjustment compensates for the curvature of the CRT tube by making it in-focus across the entire sweep. If your trace is out-of-focus in certain areas, but in-focus elsewhere, the ASTIGMATISM needs to be adjusted.

TRACE ROTATION - is a small coil around the CRT that skews the trace to ensure it is perfectly horizontal. Set the scope to GND, free-run the sweep and adjust the vertical position so the beam is along a graticle (division) line. Adjust the TRACE ROTATION until the beam is perfectly parallel to the horizontal graticles. On scopes without this adjustment, leveling the trace is performed by loosening the CRT mounting brackets and physically rotating the CRT tube for a level trace, then re-tightening the CRT brackets.

!!! WARNING!!! HIGH VOLTAGE ARE PRESENT AROUND THE CRT TUBE. USE EXTREME CAUTION WHEN PERFORMING THE ABOVE PROCEDURE.

DC BALANCE - is a DC offset in the vertical amplifiers that causes a shift in the trace baseline when changing vertical scales. It is most obvious when displaying AC signals. For example, you are displaying a 10Vpp sine wave, centered on the center graticle at 2v/div. Changing to 5v/div, the sine wave shifts away from the center graticle, up or down ... that is, it assumes a DC bias error in the vertical amplifiers. The DC BAL is adjusted until no shift occurs when changing vertical scales. Admittedly, setting the scope

for perfect dc balance on all scales is an exercise in patience!
DC BAL is often an internal adjustment, or on the rear panel. On
dual trace scopes, there will be one for each channel.

HV ADJUST - is the high voltage that controls the intensity of the
trace. Turn up the INTENSITY control to its brightest position,
then adjust the HV ADJ for a trace slightly brighter than normal
intensity. Return the INTENSITY for normal brightness. The INTENSITY
control now has the proper range. On some scopes, it takes a little
piddling around to properly set the HV ADJ, intensity and focus for proper
operation. The HV ADJ is often an internal adjustment.

!!! If you adjust the HV ADJUST, you may also have to recalibrate
the VERTICAL and HORIZONTAL GAINS as described above for proper
calibration (V/division and time/division accuracy).

An oscilloscope is an amazing instrument for making voltage, time and
frequency measurements ... however, all of these measurements are
worthless unless you ensure the vertical and horizontal stages of
your scope are reasonably calibrated. The time to calibrate your
scope will be worth the ease and reliability of subsequent measure-
ments you will make.

END OF PART 1

72, Paul Harden, NA5N
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Date: Sun, 28 Sep 1997 17:48:32 -0600
From: Paul Harden <pharden@aoc.nrao.edu>
To: qrp-1@LEHIGH.EDU
Subject: [27614] O-SCOPES: PART 2
Message-ID: <199709282348.RAA16008@zia.aoc.nrao.edu>

OSCILLOSCOPES - BASIC USE AND MEASUREMENTS
by Paul Harden, NA5N

PART 2 - LET'S MAKE SOME MEASUREMENTS
DC voltages, AC voltages, time period and frequency

NOTE: This is a text version of an article appearing in the Summer
1997 issue of "QRPP." The article contains numerous illustrations and
photos of oscilloscopes displays, which unfortunately can not be

included in a text file.

NOTE ON LIMITED BANDWIDTH SCOPES.

Today's scopes have 500MHz bandwidths or higher. Likely your scope is much less than that. A limited bandwidth scope is still very useful to the QRPer. Say the bandwidth of your scope is 5MHz. This does not mean you can't see a 7MHz (40M) signal ... it just means that the calibration of the scope is no longer valid. The peak-to-peak value of the display is not correct and much smaller than it really is, and the sweep rate may be in error. But still, you may likely be able to resolve individual cycles higher than the cited bandwidth to a certain degree, and make the gain and phase measurements that follow (since they are based on RATIOS).

Most of the examples in this article explore many regions of a QRP rig without the benefit of any great bandwidth. Experiment with your scope to learn its limitations.

!!! IF POSSIBLE, SPEND THE MONEY TO GET A GOOD SCOPE PROBE AND MAKE MEASUREMENTS WITH A GOOD GROUND CONNECTION TO GET THE MOST OUT OF THE BANDWIDTH YOU HAVE.

BASIC MEASUREMENTS.

It is assumed you have your scope relatively calibrated as described in Part 1, and familiar with the front panel controls. For the sake of the following discussions (since illustrations can not be included), it is assumed the scope has 4 vertical and 4 horizontal divisions.

DC VOLTAGES.

Say you want to check the T-R switch (Transmit-Receive) in your QRP rig. Usually this will be a transistor (or inverter gate, such as in the 38-Special). The key line goes to the base, which is pulled HI to some positive voltage (on key UP), and goes LO to ground when the key is DOWN (or closed).

Setup your scope for DC voltage at 2v/div. and a slow sweep speed (say 100mS/div). Set the trace so the bottom graticle (division line) is 0v. Place the scope lead on the T-R switch transistor base. Say the trace deflects two divisions. This would be 4vdc bias on the base. Now close the morse code key. The trace should drop to 0v.

The purpose of the T-R switch is to generate a POSITIVE voltage on key down, which is taken from either the collector or the emitter (depending upon the circuit configuration). Say it comes off the emitter. Move the scope probe to the emitter. Now you should have about 0v with the key UP, and with the key DOWN, the voltage should

jump to some positive voltage, often +12v. In this case, the trace will go off the top of the screen. Change the scope to 5v/div. Re-verify that 0v is the bottom graticle. On key DOWN the trace jumps up 2 divisions. The key DOWN voltage is thus +10v. If the emitter is "stuck" at +10v on both key up and down, the transistor is not switching. If the base signal above is correct, then likely the transistor is bad.

While this test could be done with a DVM, the integration time is slow requiring long key downs to get the proper voltage. A scope will also show you how clean the switching is, or if there is an AC voltage (or RF noise) riding on the T-R voltage.

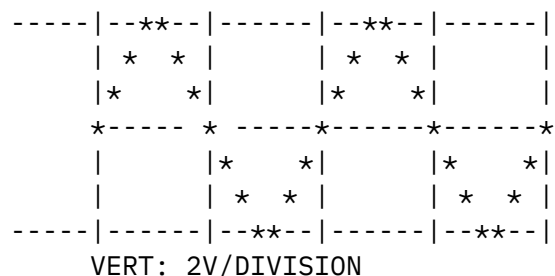
Scopes are thus good DC voltmeters, with about a 5% reading accuracy.

AC VOLTAGES.

Here is where a scope pays for itself by making AC voltage (and frequency) measurements. You must remember that AC voltage displayed on a scope is PEAK-TO-PEAK VOLTAGE, while a voltmeter or DVM measures AC voltage in RMS (root mean square). RMS voltages read on a DVM will be ABOUT 1/3rd the peak-to-peak voltage (Vpp) shown on a scope. Or specifically,

$$V_{rms} = .707 \times V_{peak} = 0.5(.707 \times V_{pp}) = .35 \times V_{pp}$$

If the signal on your scope looks like that in the quasi-illustration, at 2V/division, then the signal would be 4V peak-to-peak (4Vpp), or 1.4Vrms if read on a DVM or voltmeter.



For example, let's measure the output voltage and frequency of the sidetone oscillator in your QRP rig. Setup the scope for 1v/div, AC volts, and a sweep speed of 1mS/div. Connect the scope probe to the audio output of your rig and set the volume control on key DOWN so the audio sinewave is 2 division peak-to-peak. This would then be 2Vpp AC, and should look similar to the illustration above.

AC FREQUENCY MEASUREMENT.

With this same waveform, we might as well see what frequency our sidetone or transmit-offset is at. Most operators prefer the side-tone to be about 700Hz. With the same setup as above, trigger the scope for a stable waveform and the time base sweep to display 2 or 3 cycles. Center the waveform on the center horizontal graticle so the sinewave goes one division above, and one division below the

center graticle. Now move the HOR POSition so the first "zero crossing" of the sine wave is on the first or second vertical graticle. With this setup, zero-crossing would be where the sine wave crosses the center horizontal graticle. Now measure the time it takes to make one complete sine wave, from one zero-crossing (sine wave going positive) to the next positive going zero crossing.

Say one complete sine wave takes one and half horizontal divisions. At 1.0mS/div., this would be 1.5mS per cycle. Frequency is the reciprocal of time, such that the sidetone frequency is:

$$f = 1/t = 1/1.5\text{mS} = 667 \text{ Hz}$$

(Sidetone frequency is the tone heard on key DOWN). This may be a little low to your liking. To raise it to 700Hz, calculate the period of 700Hz, which is $t = 1/f = 1/700 = 1.4\text{mS}$. At 1.0mS/div, you can adjust your XMIT OFFSET on key down until zero-crossings (or the positive peaks) are 1.4 divisions apart. This will be 700 Hz. (The XMIT OFFSET is not adjustable in all rigs ... such as the 38-Special. In this case, it usually requires changing the value of a capacitor on the XMIT MIXER and usually discussed in the instruction manual).

QUALITY OF THE WAVEFORM is another feature of a scope that is unsurpassed, since you are "seeing" the waveform in real time. For example, say the audio output from your QRP rig is not a clean sine wave, that is, it has a slant to it, or the rise time takes longer than the fall time. This could be due to improper time constant on the audio amplifier coupling capacitors or improperly biased amplifiers. Or, say the audio output sine wave is flattened at the top, looking sorta like a square wave then a sine wave. This would be a raspy sounding sidetone, and due to the audio power amplifier being overdriven and in gain compression (clipping). You should be able to see this effect by turning the volume control to its maximum level, overloading the output audio amplifier (unless your QRP rig has anemic audio like some).

The o-scope is an invaluable tool for detecting and diagnosing such distortions and impurities in the signal quality. The audio output of a QRP rig, whether the sidetone or an on-the-air signal, should be a fairly pure sine wave. If not, something is wrong, from a poor product detector action, poor filtering after the product detector, poor coupling capacitors, or severe noise being introduced into the audio at some point.

By tuning in an on-the-air signal and plotting the Vpp at different audio frequencies, you can plot the filter response of your QRP rig. This will be discussed in detail in a later section. You can

also adjust your BFO on the product detector for the maximum Vpp of the received signal for centering the signal in the filter passband. Note how these important tests and adjustments (sidetone, filter response and setting the BFO) are a few of the things that can be done on a scope with a very limited bandwidth ... since you're not looking at anything beyond the audio range.

Once you get comfortable making the above voltage, time and frequency measurements, you might want to go through your QRP kit with the schematic and record the various DC and AC voltages and waveforms at pertinent locations in the circuit. This will be a great aid in the future should your rig develop a problem. NOTE however, that signal levels from the receive mixer through the IF crystal filters are VERY weak and can not not be seen on even an excellent scope. The main exception to this would be the local oscillator (LO) drive on pins 6 and 7 on a NE602. They are usually in the order of 100mVpp.

!!! NOTE: You can't hurt anything by probing around the circuit of your QRP rig. The biggest mistake made by beginners is to let the ground lead come loose and drag along the tops of components, which can short out the power supply or damage a component ... OR when putting the scope probe on an IC pin, to slip and let the probe touch two pins at once. This will short out the two pins, which in some cases, could cause damage to the IC. For example, on a NE602, measuring the Vcc voltage on pin 8. A slip to Pin 7 (the OSC input) could destroy the internal oscillator if the pin 8 to 7 short persisted a second or two.

END OF PART 2

72, Paul Harden, NA5N
NA5N@Rt66.com

Date: Sun, 28 Sep 1997 17:49:34 -0600
From: Paul Harden <pharden@aoc.nrao.edu>
To: qrp-l@Lehigh.EDU
Subject: [27615] O-SCOPES: PART 3
Message-ID: <199709282349.RAA16026@zia.aoc.nrao.edu>

OSCILLOSCOPES - BASIC USE AND MEASUREMENTS
by Paul Harden, NA5N

PART 3 - LET'S MAKE SOME MEASUREMENTS

Amplifier gain and insertion loss

NOTE: This is a text version of an article appearing in the Summer 1997 issue of "QRPP." The article contains numerous illustrations and photos of oscilloscope displays, which unfortunately can not be included in a text file.

AMPLIFIER GAIN

The gain of an amplifier can be measured in terms of VOLTAGE GAIN, which is simply $A_v = V_{out}/V_{in}$. For example, if the input to an amplifier is 1Vpp, and the output is 4Vpp, then the amplifier has a VOLTAGE gain of 4.

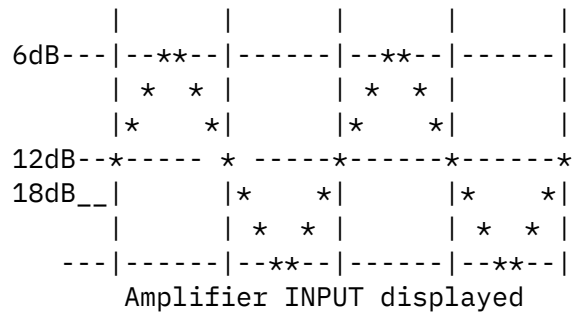
GAIN IN DB is often more useful and is how the gains of amplifiers are usually expressed. With dB (decibels), everytime you DOUBLE the AC voltage, you ADD 6dB of gain. It is the RATIO of output to the input, and this RATIO is easy to measure on a scope, even for signals that exceed the cited bandwidth of your scope to some extent.

Say you just built a single transistor amplifier to boost the audio signal before the final audio amplifier (usually an LM386). It is often easier to start with the OUTPUT for measuring amplifier gain. Inject an audio signal into the amplifier (transistor base). Place the scope lead on the transistor COLLECTOR, and set the scope so the output waveform is exactly 4 divisions peak-to-peak. Do not disturb oscscope settings.

Now move the scope leads to the amplifier INPUT, the transistor's base. You will of course have a much smaller signal, and the ratio of the input to the output will be the gain in dB. For example, say the input signal is 2 divisions peak-to-peak. This would be 6dB of gain, since you are DOUBLING the signal in the amplifier. Everytime you DOUBLE the voltage, it is 6dB of VOLTAGE gain. If the input signal is 1 division peak-to-peak, then the amplifier gain is 12dB. (With the output still at 4Vpp or 4 divisions). Going from 1 division to 2 division is 6dB gain; going from 2 divisions to 4 divisions is 6dB gain. Therefore going from 1 division to 4 divisions is 12dB (6dB + 6dB).

This illustration shows how	0dB---	-----	-----	-----	-----
to measure Amplifier GAIN					
on an oscscope. FIRST, adjust					
the scope so the amplifier	3dB---	-----	-----	-----	-----
OUTPUT is 4 DIVISIONS peak-					

to-peak. THEN, switch to the INPUT, and position the waveform so the NEGATIVE peaks are on the bottom division, as shown. Where the POSITIVE peaks of the input occur will be the GAIN in dB by reading the scale on the left. You may want to make such a scale and attach it to the side of your CRT screen for making quick measurements in dB's.



IF YOU WANT TO DO IT MATHEMATICALLY ...

$$V_{out} = 4V_{pp}$$

$$V_{in} = 1V_{pp}$$

$$\text{Therefore, voltage gain } A_v = V_{out}/V_{in} = 4v/1v = 4$$

and gain in dB is:

$$dB = 20\log(A_v) = 20\log(4) = 20(0.602) = 12dB$$

OR AS SHOWN DIRECTLY ON THE O-SCOPE AS DESCRIBED ABOVE.

Since this is a relative measurement (a RATIO), the absolute value of V_{in} or V_{out} does not need to be determined.

INSERTION LOSS.

In some circuits, such as filters or attenuators, the LOSS in dB needs to be determined, and this is called the INSERTION LOSS. It is determined the same way as amplifier gain, except the INPUT will be GREATER than the OUTPUT since there is a LOSS involved.

For example, with a signal generator connected to your QRP rig antenna input, you want to measure the insertion loss of your IF crystal filter. At the filter input, you can just barely squeek out 2 divisions of input signal on your scope at its most sensitive setting. (Perhaps due to exceeding the scope's bandwidth). The output from the crystal filter is 1 division, or a 50% reduction. The insertion loss would be 6dB (since if the power were HALF, or 50%, it would be a 6dB LOSS).

OR MATHEMATICALLY USING SCOPE DIVISIONS:

$$\begin{aligned} \text{Insertion loss (dB)} &= 20\log(V_{in}/V_{out}) = 20\log(2 \text{ div.}/1 \text{ div.}) \\ &= 20\log(2) = 20(.30) = 6 \text{ dB} \end{aligned}$$

If the output were 1.5 divisions,

$$\text{Insertion loss (dB)} = 20\log(2 \text{ div}/1.5 \text{ div}) = 2.5 \text{ dB}$$

Again, you are determining the insertion loss of a circuit element

from the RATIO of input to output. You do not need to make absolute measurements. So if the frequency is beyond the bandwidth of your scope, as long as you can get enough vertical deflection to measure it's magnitude in some terms of divisions, and able to see the signal either get smaller or larger, you can estimate the gain or loss in dB fairly accurately. If the signal DOUBLES, it is 6dB; if it is about half of doubling, it is about 3dB; if the change is barely noticeable, it is around 1dB. This is usually sufficient for determining if circuit elements are working properly. For example, using the insertion loss of an IF crystal filter as above, if you determine the loss to be a few dB, the crystal filter loss is acceptable. If it is much more than around 6dB, you may have a problem. And if you can't see any output, you have a real problem. (Loss is about 1 to 1.5 dB per crystal in filter). Same with checking the gain of amplifiers. It's not important if the gain is 6.2 dB or 6.5 dB, but whether the gain is ABOUT what you'd expect. If the output of an amplifier is ABOUT DOUBLE the input, you have 6dB of gain. If the output is just a bit larger than the input (or the same) ... then you've got a problem (no or little gain occurring).

With a little practice on your o-scope, you will learn to recognize approximate gains and losses in dB's very quickly from the oscscope display.

You might want to go through your QRP kit with the circuit and measure the gains through different stages. If your rig has an MC1350 IF amplifier, what is it's gain with a strong signal vs. a small signal to see if the AGC is working properly. What is the gain of the LM386 audio output amplifier? With larger bandwidth scopes, check the gains of the RF driver transistor and output PA transistor. Knowing what these gains are could help troubleshoot the circuit later should a problem develop.

END OF PART 3

72, Paul Harden, NA5N
NA5N@Rt66.com

Date: Sun, 28 Sep 1997 17:52:05 -0600
From: Paul Harden <pharden@aoc.nrao.edu>
To: qrp-l@Lehigh.EDU
Subject: [27616] O-SCOPES: PART 4

Message-ID: <199709282352.RAA16155@zia.aoc.nrao.edu>

OSCILLOSCOPES - BASIC USE AND MEASUREMENTS
by Paul Harden, NA5N

PART 4 - MEASURING PHASE SHIFTS

NOTE: This is a text version of an article appearing in the Summer 1997 issue of "QRPP." The article contains numerous illustrations and photos of oscilloscope displays, which unfortunately can not be included in a text file.

MEASURING PHASE SHIFTS

Phase relationships between two signals at the same frequency can be measured with 2-5 degree accuracy with a scope, although more suited for a dual-trace scope. The REFERENCE signal is applied to CH. 1 and the signal to be phase measured to CH. 2. For proper phase measurements, ensure your dual trace display is in the CHOPPED mode, not ALTERNATE mode. (Alternate mode can effect the triggering position for the second, or CH.2 sweep).

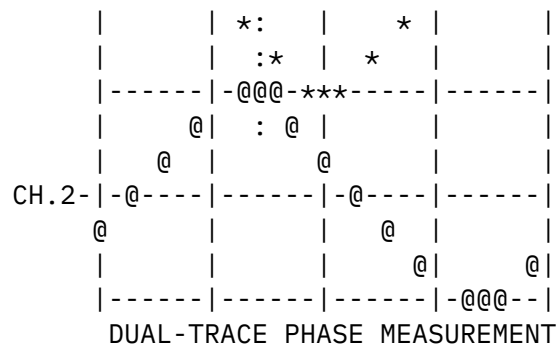
There are many methods to do this. One is to stretch out the signal so it takes 4 full divisions, so each division is 90 degrees of phase. By measuring from a common point on one signal to the other (zero crossings or from the peaks), the phase can be measured.

For example, say you are making a phased array antenna system, in which one feedline must cause a 90 deg. delay. You calculate the electrical length for a quarter wavelength [$L = (246/f) \times \text{velocity factor}$] and cut the coax to that length. You are now working on blind faith that you have exactly 90 degrees. With a scope, you can measure it fairly accurately by injecting a signal into one end with a signal generator (at the frequency of interest) and a 50-ohm load on the other. Connect the scope CH.1 to the coax input (signal generator end) and CH.2 to the load end and measure the phase.

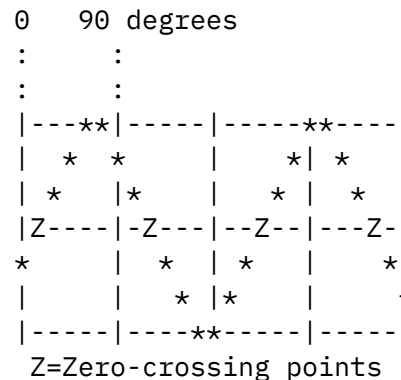
Trigger the scope and move the horizontal position and/or the time base vernier so the positive peak of the CH.1 sinewave is on the first vertical graticle line and the

second positive peak is on the	:	:	+117 degree
fourth vertical graticle, as	--->:	:<---	Phase Shift
shown in the illustration to	:	:	based on PEAKS
the right. Now measure the	**----- ----- ----- -----**		
phase by noting where the	* : *		
first positive peak on CH.2	* : *		
occurs. Say it occurs about	CH.1- -----*----- -----*-----		

1.3 divisions to the RIGHT of the CH.1 positive peak. Since one division is 90 degrees, using this method, then
 1.3 div. x 90 deg. = 117 deg.
 YOUR DELAY LINE IS TOO LONG!
 Cut off an inch or two at a time until the CH.2 peak is one division from the CH.1 peak (or on the 2nd vertical graticule as shown in the illustration) for precise tuning of the delay line.



Another method is to make the CH.1 signal to be two divisions high, and center it between the two divisions, such that the zero-crossing points are on the middle graticule line. Where the CH.1 sinewave signal crosses zero going positive is the 0 deg. REFERENCE; the positive peak is 90 deg.; the negative going zero crossing is 180 degrees, etc. For CH.2 to be 90 degrees delayed from CH.1, the CH.2 sinewave should cross zero, going positive, right under the 90 degree peak of the CH.1 signal. If the CH.2 zero crossing is farther to the right from the CH.1 positive peak, the phase shift is MORE than 90 degrees. Back to the example of the coaxial delay line, you would cut an inch or two at a time until the CH.2 zero crossing is directly underneath the CH.1 positive peak (the 90 degree point).



And still yet another method of comparing the phase between two signals on a dual-trace scope is to accurately measure the period it takes for one complete sine wave on the CH.1 reference channel. Say it is 140ns (that would be 7.14 MHz, by the way). Now say the CH.2 signal is 50ns delayed from the CH.1 signal. The phase shift would be:

$$\text{Phase} = 50\text{ns}/140\text{ns} \times 360 \text{ degrees} = 129 \text{ degrees}$$

POSITIVE OR NEGATIVE PHASE SHIFT?

One thing you must remember is how to "read" phase shifts on an oscilloscope. When comparing two signals as described above, remember that if the CH.2 signal peak is to the RIGHT of the CH.1 peak, then the CH.2 signal is OCCURRING LATER IN TIME than the CH.1 signal, because time is traveling from left to right. If the CH.2 peak is

say 90 degrees to the LEFT of the CH.1 peak, then the CH.2 signal occurred in time BEFORE the CH.1 signal. This would then be a -90 degree phase shift, or 270 degrees. Think about this carefully before you start cutting the coax on that delay line!

PHASE MEASUREMENTS ON A SINGLE TRACE SCOPE

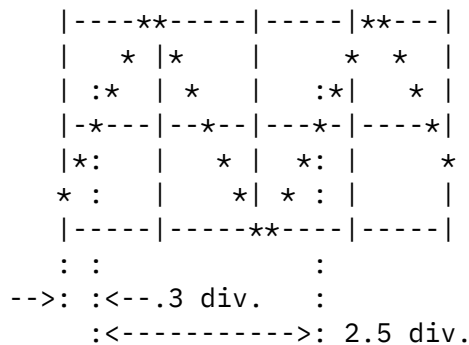
Phase measurements can be made on a single trace scope as well. First, connect the REFERENCE signal, using a BNC "T", to both the VERTICAL INPUT to the scope and the EXTERNAL TRIGGER and select EXTERNAL as the trigger SOURCE. Adjust the TRIGGER LEVEL so the zero-crossing occurs at the beginning of the trace on the first vertical graticule. Now remove the reference signal from the scope's vertical input (but NOT the external trigger input) and connect the signal to be phase measured to the vertical input ... WITHOUT altering the time base or trigger level. The sinewave of the signal to be tested should be on the CRT, with the trace being triggered from the external trigger input, or the reference signal.

The sinewave now on the CRT

likely will not have it's zero-crossing starting at the first vertical graticule as the reference signal did, but some place else. On the illustration to the right, the zero crossing occurs about 0.3 divisions to the RIGHT. This can now be converted to the phase angle in degrees. In the illustration, one complete cycle takes 2.5 divisions, and the phase delay from the reference is 0.3 div.

The phase shift is therefore:

$$\begin{aligned}\text{Phase shift} &= 0.3 \text{ div} / 2.5 \text{ div.} \times 360 \\ &= 0.12 \times 360 = 43 \text{ degrees}\end{aligned}$$



SINGLE TRACE SCOPE
PHASE MEASUREMENT

The SINGLE-TRACE scope method is a little easier to do if you make the sine wave of the reference to be 4 divisions for one cycle, thus making 90 degrees per division. The phase angle can be guesstimated a little quicker with the signal to be phase measured.

It is noteworthy to mention that the above examples, measuring the phase through a delay line at 7 MHz, would require an oscilloscope with a 20MHz or higher bandwidth, if for no other reason, then just assure that the time base is fast enough to display 1 or 2 sinewave cycles on the CRT. If at your fastest sweep speed, the 7MHz signal is displayed as many cycles, then obviously the accuracy that you can determine the phase angle will be highly degraded.

LOW FREQUENCY PHASE SHIFTS ON A LIMITED BANDWIDTH SCOPE.

If your scope has a limited bandwidth of only a few MHz or less, there are still useful phase measurements that can be performed.

One interesting experiment is to measure the phase shift of the audio signal at different frequencies as it travels through the stages in a CW audio filter. This is done by putting the input to the CW audio filter on CH.1 and the output on CH.2. What is the phase shift of the wanted vs. unwanted frequencies? Recall that an audio filter works by cancelling out (180 degree phase shift) the unwanted signals, while re-enforcing (0 degrees) the frequencies you wish to pass. There will only be one audio frequency for which there is a 0 degree phase shift. This will be the "pole frequency" of the active filter, or the frequency you wish to have the maximum gain. For CW QRP rigs, this should be around 700 Hz.

And finally, on a limited bandwidth scope, the phase angles of higher frequencies can be determined by applying the reference signal to the vertical input and the signal to be phase measured on the external horizontal input. This will form a lissajous pattern, the angle or tilt will signify the phase angle.

END OF PART 4

This is the last part of this series of articles on OSCOPES posted to QRP-L. There will be another series on scope measurements posted in the future (many months) that will include some advanced techniques, such as measuring sideband rejection, tuned circuits, filter responses, group delay, VCO phase noise, etc. This will be the contents of part 2 of the oscscope article for the Winter QRPP. I haven't written it yet or made hardcopies of the scope displays. But following publication in QRPP, I will convert it to a text file and post it to QRP-L as I did this one.

PS - making those waveform illustrations really sucked swampwater!

72, Paul Harden, NA5N
NA5N@Rt66.com

Date: Sun, 28 Sep 1997 20:45:56 -0400 (EDT)
From: "Paul R. Valko" <prvalko@Oakland.edu>
To: Paul Harden <pharden@aoc.nrao.edu>
Cc: Low Power Amateur Radio Discussion <qrp-1@LEHIGH.EDU>

Subject: [27617] Re: Solar Storm fizzlle
Message-ID: <Pine.OSF.3.95.970928204325.3734A-1000000@vela.acs.oakland.edu>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

www.acs.oakland.edu/~prvalko

On Sun, 28 Sep 1997, Paul Harden wrote:

> The latest report on the the solar and geomagnetic conditions state
...
> missing the Earth altogether. Only brief minor storming periods have
...
> We lucked out on this one.

I and a few thousand other VHF operators were hoping for some aurora.
WE did NOT luck out :-)

73 =paul= w8kc
collector of TenTecs and other fine plastics

Date: Sun, 28 Sep 1997 21:21:15 -0400
From: "Kevin F. Glynn" <kfglynn@prodigy.net>
To: "LIQRP" <liqrp@waterw.com>, "Low Power Amateur Radio Discussion" <qrp-
l@Lehigh.EDU>, <n8pvz@voyager.net>
Subject: [27618] Re: MFJ-9420
Message-ID: <199709290119.VAA64330@pimout1-int.prodigy.net>
MIME-Version: 1.0
Content-Type: text/plain; charset=ISO-8859-1
Content-Transfer-Encoding: 7bit

Hi Bernard,

I usually reply direct, but wanted comments to go the QRP-L in case others
may be interested as well.

I've owned my MFJ-9420 20M SSB rig since Mar 97. First time on the air I
recd 55 from Poland, 57 from Little Cayman, 55 agn from Poland, 57 from
Brazil. Brought this rig to FLA during March and April while on vacation.
With an inverted-vee up maybe 25' in a palm tree I worked all over East
coast and central Africa. In fact, that station told me I was the
strongest sig on the band. I had to laugh.

I've also worked with this radio portable many times during the Spring and Summer to an inverted-vee up about 30-35'. I usually received anywhere from 54 to 59 reports. Granted, many of the European ops are running beams pointing to US helping my sig, but I've received only very good to excellent reports on my audio. This is with the MFJ mic. Must have worked at least 15 countries during the summer from a local park in Brooklyn, NYC at least.

Yesterday the LIQRP club got together for a picnic meeting at Sunken Meadow Park in Long Island, NY on the North Shore. With the help of Tom AA2VK's slingshot I was able to get a 40M center-fed dipole with ladder line feedline up about 40 or so feet. I promptly received a 59 from Slovenia, and worked about 5 OZ stations from Denmark during their contest (they were real reports). Also recd 57 from Belgium and Northern Ireland and Spain.

Thought the rig was a bit expensive initially, but since became a believer. The speech processor is the difference in this rig. Rick Littlefield K1BQT did an excellent job with this rig. Hope this helps, and I'm sure Rick may be able to answer any questions you may have. He's helped me in the past with this and my MFJ-9030 and 9040 rigs as well.

GL

72 Kevin N2T0
Brooklyn, NYC
kfglynn@prodigy.net

Date: Sun, 28 Sep 1997 21:27:12 -0400
From: "Kevin F. Glynn" <kfglynn@prodigy.net>
To: "QRP-L" <qrp-l@Lehigh.EDU>, "LIQRP" <liqrp@waterw.com>, <n8pvz@voyager.net>
Subject: [27619] MFJ-9420 Output Power
Message-ID: <199709290125.VAA102136@pimout1-int.prodigy.net>
MIME-Version: 1.0
Content-Type: text/plain; charset=ISO-8859-1
Content-Transfer-Encoding: 7bit

Hi Bernand and gang,

Forgot one more thing. When using my 12v gel cell, a whistle into a dummy load indicates about 5 or so watts. The power is a bit more when using 13.8v power supply. I was concerned about this at first, but not too worried after making my first QSOs with the rig.

72 Kevin N2T0

Brooklyn, NYC
kfglynn@prodigy.net

Date: Sun, 28 Sep 1997 21:31:23 -0400
From: pthomson@bruderhof.com
To: qrp-1@Lehigh.EDU (Low Power Amateur Radio Discussion)
Subject: [27620] Re: WA3NNA/B Propagation Test
Message-ID: <6EAE2D348100001F5CAB@mail.brunderhof.com>
MIME-Version: 1.0
Content-type: text/plain; charset="ISO-8859"
Content-transfer-encoding: 7bit

n4bp@shadow.net wrote:

On Sat, 27 Sep 1997 ke3fl@juno.com wrote:

> -----
> Pwr Msg Call Dsg UTC RST, info
> -----
> 2 W Fall de WA3NNA/B QRP 13:13 599
> etc.
> -----
> At this point I gave up since I had house jobs to do.
> I did keep an ear out and continued to hear the 2W sig with the
> pre-amp on. Very interesting conditions.
>
> From Pete Rossi's original announcement of the beacon:
>
> "*** PLEASE ** DO NOT POST ANY CODEWORDS YOU COPY ***"
>
> Your post kind of destroys the integrity of any following reports...

Actually, this post might _help_ verify the integrity of following posts.
Not to give it away, but _none_ of the words listed is correct!

72,
Pierre KA2QPG

Date: Sun, 28 Sep 1997 20:41:08 -0700
From: "Kelly Ellison" <kelman@dialnet.net>
To: <qrp-l@Lehigh.EDU>
Subject: [27621] FT-301S info?, TAC-1 WTB
Message-ID: <199709290140.UAA12704@shell.dialnet.net>
MIME-Version: 1.0
Content-Type: text/plain; charset=ISO-8859-1
Content-Transfer-Encoding: 7bit

Hello all,

I found a Yaesu FT301s Digital for sale for \$225.00. Does someone out there run a FT301s? The one thing I am concerned about is frequency stability and Selectivity. Can anyone give me quick review of the rig. Also, I am looking for a S&S Engineering TAC-1 for 40 meters. Did anyone else see that Argonaut 515 for sale in rec.radio.swap? I hope one of you that got that bargain! 73,

Kelly Ellison
WB0WQS
QRP-L #702

Date: Sun, 28 Sep 1997 20:09:30 -0600
From: Jess Gypin <jessqrp@concentric.net>
To: qrp-l@LEHIGH.EDU
Subject: [27622] KH6AQ freq on 14025.5
Message-ID: <342F0DDA.37C2@concentric.net>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Guess I forgot the frequency huh?????
It's ok, the medication should start kicking in soon....

14025.5

--

Jess NOTFI <><
<http://www.concentric.net/~jessqrp>
qrp-l #1232 CQC #92 1997 Fox

Date: Sun, 28 Sep 1997 19:50:21 -0600
From: Jess Gypin <jessqrp@concentric.net>
To: qrp-1@Lehigh.EDU
Subject: [27623] KH6AQ big sig on 20 meters right now 01:50 9/29
Message-ID: <342F095D.5336@concentric.net>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

KH6AQ is working stateside right now and BIG sig into Colorado right now.

--
Jess NOTFI <><
<http://www.concentric.net/~jessqrp>
qrp-1 #1232 CQC #92 1997 Fox

Date: Sun, 28 Sep 1997 22:32:08 -0400 (EDT)
From: "L. Jeffrey Hetherington" <jhetheri@freenet.npiec.on.ca>
To: Multiple Recipients of List <qrp-1@Lehigh.EDU>
Subject: [27624] Canadian QRP Award
Message-ID: <Pine.A41.3.96.970928222930.31902A-1000000@NiagaraNet.npiec.on.ca>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

Well all, its be awhile since I introduced the Canadian QRP Award and there have been a few applications and awards issued (K5F0: I just put yours in the mail Chuck, sorry for the delay.) The information about the award appeared in CQ's October Issue so I will re-print the info for your pleasure and information as well. You can get the info at the Canadian QRP Award web site as well:

<<http://www.geocities.com/Colosseum/2572.QRP.html>>

Canadian QRP Award

Sponsored by VA3JFF

This award is designed to encourage QRP operations by recognizing the accomplishment of completing low-power communications with the twelve Provinces and Territories of Canada

REQUIREMENTS

- * QRP is defined for the purpose of this award as not more than 5 watts CW or 10 watts PEP SSB
- * Contacts need _NOT_ be confirmed by QSL cards. If the contact was made, it may be counted for this award
- * To receive the certificate, send basic log data for the 12 contacts to the address below. Please include \$2.00 or 2 IRCs for each certificate requested
- * Endorsements are available for specific bands, modes, and power levels. Endorsements can be added to the original certificate order at no additional cost. Endorsement stickers are available at any other time for \$1.00 or 1 IRC
- * Certificates are printed on 8.5 x 11 inch paper. Black ink on a full colour, full page, scroll art-work background and can be framed using a standard certificate frame
- * Each certificate is sequentially numbered, as well as being numbered by country and province/state/call area
- * There are no time and date requirements for this award, so check your logs and see if you meet the requirements
- * Mail to:

Canadian QRP Award
c/o Jeff Hetherington, VA3JFF
3399 Cardinal Drive
Niagara Falls, Ontario
Canada L2H 3A6

PROVINCES & TERRITORIES OF CANADA WITH THEIR USUAL PREFIX

Nova Scotia (VE1 & CY0 & CY9)	Quebec (VE2 & VA2)
Ontario (VE3 & VA3)	Manitoba (VE4)
Saskatchewan (VE5)	Alberta (VE6)
British Columbia (VE7 & VA7)	North West Territory (VE8)
New Brunswick (VE9 & VE1)	Yukon Territory (VY1)
Prince Edward Island (VY2 & VE1)	Newfoundland (V01 & V02)

Date: Sun, 28 Sep 1997 22:42:10 -0400 (EDT)
From: LynnSimons@aol.com
To: qrp-l@Lehigh.EDU (lowpoweramateurradiodiscussion)
Subject: [27625] Looking for an Argonaut II

CW OPERATORS ORP CLUB 484, FISTS, ARRL

Date: Sun, 28 Sep 1997 23:27:32 -0500 (CDT)
From: Adrian Weiss <aweiss@sunflowr.usd.edu>
To: QRP-L@listserv.lehigh.edu
Subject: [27627] RE: Old G3RJV Reviews of JOY OF QRP
Message-ID: <Pine.SOL.3.94.970928232532.26156A-1000000@sundance>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

Hi gang!

I was sorting through some old stuff and found G3RJV's review of JOY OF QRP when it first came out. Anyone remember this one?

=====

THE JOY OF QRP: STRATEGY FOR SUCCESS
Adrian Weiss WORSP

All QRP operators know, or should know, Ade Weiss WORSP (ex K8EEG). Ade is the founder of MILLIWATT, the original QRP journal, now sadly no longer published; the QRP editor of CQ Magazine and the originator and provider of the Milliwatt DXCC Programme of Awards. Now we have his long awaited book on QRP operation. Long awaited because at one time we thought it would be published before the GQRP-CLUB Circuit Handbook.

I am pleased to say that the book has been worth the wait. THE JOY OF QRP is the most comprehensive publication on QRP that I have seen, in fact the first that undertakes a broad look at our fascinating area of the hobby. The book begins with a brief historical background to QRP operation and then describes the whole gamut of our subject: QRP organisations and awards, objectives and planning for operation, commercial equipment - both QRP and modified QRO, homebrewing the first QRP rig, general operating techniques, planning specific types of QRP operation, and concludes with a

very useful chapter on RF power measurements. In short, a comprehensive guide to the whole subject of low power amateur radio operation on the HF bands.

I can recommend it to all QRP fans without the slightest hint of bias or fellow-traveller nepotism because he's rude about the G-QRP-CLUB! He says we should 'catch up with the modern world' tut, tut I thought we were ahead of it! But all is forgiven Ade, it is a great book for QRPers and a lot of QRO operators would benefit from reading it.

Rev George Dobbs G3RJV

Date: Sun, 28 Sep 1997 23:31:24 -0700
From: Charles Kadesch <chas@digizen.net>
To: qrp-1@Lehigh.EDU
Subject: [27628] FS- V22, NIR12, AT-11, etc.
Message-ID: <342F4B3C.37D6@digizen.net>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

FOR SALE:

1. WBL Design model V22 paddle. Serial #8. Excellent conditon, used very little. \$100.
2. JPS NIR-12. Works fine. Like new, in factory box. \$200.
3. LDG AT-11 Automatic Antenna Tuner. Unbuilt kit. \$120.
4. Kanga Super Tee QRP Antenna Tuner. \$50.
5. MFJ 901B Antenna Tuner. \$25.
6. Husky 12 volt regulated power supply. New. \$10.
7. Tejas Backpacker II QRP Transceiver. \$85.

All plus shipping from MD.

-72-

Chas W3KC

chas@digizen.net

Date: Sun, 28 Sep 1997 21:48:43 -0700
From: Brian Kassel <bkassel@dancris.com>
To: aweiss@sunflowr.usd.edu
Cc: Low Power Amateur Radio Discussion <qrp-1@Lehigh.EDU>
Subject: [27629] Re: Old G3RJV Revies of JOY OF QRP
Message-ID: <342F332B.6C5A@dancris.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Adrian Weiss wrote:

>
> Hi gang!
> I was sorting through some old stuff and found G3RJV's review
> of JOY OF QRP when it first came out. Anyone remember this one?
> =====
>
> THE JOY OF ORP: STRATEGY FOR SUCCESS
> Adrian Weiss WORSP

Adrian:

Heck yea! I bought my copy at about the same time, and display it proudly in my Ham Radio "classics" bookshelf.

Sure miss your Milliwatt too. I have the CD that was offered sometime ago that copied all of the issues.

Any chance that we may see a future QRP literary endeavor from that neck of the woods?

Not that the great QRP periodicals what we have now are anything to sneeze at, but there was just something about those early pieces that I, even today, continue to enjoy.

Nostalgia really isn't such a bad thing I hope.

At any rate, thanks for the memories dude.

Date: Mon, 29 Sep 1997 01:13:56 -0400 (EDT)
From: Bob Patten <n4bp@shadow.net>
To: pthomson@bruderhof.com
Cc: Low Power Amateur Radio Discussion <qrp-1@Lehigh.EDU>

Subject: [27630] Re: WA3NNA/B Propagation Test
Message-ID: <Pine.SOL.3.96.970929011203.19049D-100000@goliath>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

On Sun, 28 Sep 1997 pthomson@bruderhof.com wrote:

>
> >From Pete Rossi's original announcement of the beacon:
> >
> > "*** PLEASE ** DO NOT POST ANY CODEWORDS YOU COPY ***"
> >
> >Your post kind of destroys the integrity of any following reports...
>
> Actually, this post might _help_ verify the integrity of following posts.
> Not to give it away, but _none_ of the words listed is correct!
>

Actually, they were (at least as far as the 20mW which I copied). But
Pete apparently & wisely changed the codewords after that post of them...

73,

Bob Patten, N4BP ' ' ' ' (0 0) Plantation, FL
-----o00o-()-o00-----

E-Mail: n4bp@shadow.net
Web Page: <http://www.shadow.net/~n4bp/n4bp.htm>
Brass Pounder BBS: (954) 472-7715

Date: Sun, 28 Sep 1997 23:34:38 EDT
From: ke3fl@juno.com
To: qrp-l@Lehigh.EDU
Subject: [27631] Oops
Message-ID: <19970928.093654.11247.0.ke3fl@juno.com>

Seems I didn't read the rules of the game. I apologize to everyone for
the slip about the code words. I was wondering how one would validated
after a post. Should've looked at the rules again.

I thank those of you who pointed out my slip in a kind correcting way.

To the others, get a life. We all make mistakes. I was fixing door
handles, cleaning the garage, building a frame, and trying to listen to
the test pretty much all at the same time. What, you want me to read
rules too? :-)

73 & 72 de KE3FL

Phil K

Date: Mon, 29 Sep 1997 03:08:18 -0400 (EDT)
From: Scott Bauer <ke3nv@erols.com>
To: qrp-l@Lehigh.EDU
Subject: [27632] Collins List found, thank you
Message-ID: <199709290708.DAA23478@smtp2.erols.com>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Thanks to every one that sent the address for the Collins list.

Scott

Date: Sun, 28 Sep 1997 23:55:05
From: Gary M - W2UX <MAIL4GARY@worldnet.att.net>
To: qrp-l@lehigh.edu
Subject: [27633] The K8 Keyer...I love it!..
Message-ID: <3.0.1.16.19970928235505.2ebfeed0@postoffice.worldnet.att.net>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Hey Gang,

Thought some of you might be interested. I posted a message about two weeks ago about the keyer. Well I got mine and put it together in a snap. All you need is the 8 Pin keyer chip, .01uF cap, a 4.7K resistor, a 2N2222, a momentary switch, and a very little piezo transducer (if you want side tone separate from rig) and you are in business. This thing is great. Comes preprogramed with your callsign and favorite speed. Both can be changed. It even has a programable memory. All this in a little eight pin chip. Offered by K1EL and his site has a great description of the unit. Take a look at:

<http://members.aol.com/k1el/index.html>

His chip costs \$6.00 and includes shipping, handling, and manual.

Order one...you won't be disappointed.

Date: Mon, 29 Sep 1997 19:08:01 +1000
From: John Bates <batesjw@netspace.net.au>
To: qrp-1@Lehigh.EDU
Subject: [27635] Aussie QRP Club
Message-ID: <342F6FF1.D6121D19@netspace.net.au>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Gidday gang,

Just thought I would let you all know that we Aussies have a QRP club operating and that there is a home page for it also.

The name is:

CW Operators' QRP Club

<http://www.pcug.org.au/~parkerp/qrp.htm>

and

<http://www.pcug.org.au/~parkerp/nonline.htm>

email address for comments and requests for information etc..

parkerp@pcug.org.au

Hope this is of interest to some if not most of you. Like to see more of your becoming members of "our" little club too!!!.

Cheers

John

Date: Mon, 29 Sep 1997 07:14:35 -0400
From: John Dorson <jdorson@bbs.mpcs.com>
To: qrp-1@Lehigh.EDU
Subject: [27636] FS

Message-ID: <199709291114.HAA12130@bbs.mpcs.com>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

I have a QRP+ for sale. has updated e-prom for great keying.

In great condition with mike, manual and original box.

Asking \$425 including shipping (UPS) to usa...

If any interest please e-mail direct.

Thank you

John K2JHU...

Date: Mon, 29 Sep 1997 07:30:14 -0400
From: dzn1@juno.com (Howard D Rubin)
To: wb3aal@talon.net
Cc: qrp-l@lehigh.edu
Subject: [27637] Re: EPA QRP Club
Message-ID: <19970929.073107.16630.0.dzn1@juno.com>

I'm interested in forming a QRP interest group also, but within our organization.

If you are anywhere near Buck County PA, consider joining Penn Wireless Association. You can be the QRP group leader!

Our meetings are the 2nd Monday of the month and located at the Middletown Township Municipal Building.

Contact our membership committee chairperson, Rose LeNoir, AA3GD, Corresponding Secretary, at 215+943-4886.

Best regards,
Howard Rubin, N3FEL
Editor, X-Mitter
Penn Wireless Association
www.pennwireless.org

TRADEFEST '97 -- OCTOBER 19, 1997 -- BUCK COUNTY COMMUNITY COLLEGE --
NEWTOWN, PA
CALL STEVE, 215+752-1202 FOR DETAILS.

On Sun, 28 Sep 1997 16:58:54 -0400 "Ron Polityka" <wb3aal@talon.net>
writes:

> Hello to all on the QRP-L,
>
> For all those who read this message that live outside
>of EPA, sorry!
>
> Wonder if there is any kind of QRP Club that is located
>in the Eastern PA area. If so could you send me the information
>about the club.
>
> Now if there is no such club in existence, I would like to know
>who would be interested in joining one. I am just making a list.
>
> Basically I am looking to see if a bunch of QRPers that would
>like to meet and build things, antenna projects and talk about
>what is going on, Rf wise, the bands.
>
>73, Good DXing & QRPing
>Ron de WB3AAL
>
>E-mail: wb3aal@talon.net
>BBS: WB3AAL @ WB3FYL.#BER.PA.USA.NA
>
> QRP # 5318 G-QRP # 3031
> 10-10 # 13173 QRP-L # 1099
>
>

Date: Mon, 29 Sep 1997 07:00:33 CDT
From: wb0nzm@juno.com (John F Rayfield)
To: qrp-l@Lehigh.EDU
Subject: [27638] Looking for Heath HW-7/HW-8
Message-ID: <19970929.070034.2895.0.WB0NZM@juno.com>

I'm looking for a Heath HW-7 or HW-8. If anyone has one of these rigs
that they'd like to sell, please e-mail me with price/condition.

73
John

Date: Mon, 29 Sep 1997 08:29:31 -0400
From: Paul Cereste <cereste@myapc.com>
To: qrp-l@Lehigh.EDU, n8pvz@voyager.net
Subject: [27639] MFJ-9420 -Reply
Message-ID: <s42f66cc.059@myapc.com>

I borrowed a 9420 a few weeks ago. It had the MFJ mic on it. I connected it to a G5RV through a MFJ tuner. I heard a station on Pea Island, NC running a pileup on 14.260 so I threw my call into the pile. He came back to me, told me I had a 56 with good audio. I was quite impressed with the little rig.

It is rated at something like 8 watts pep, but on my antenna it was only putting out 1 watt (not a good match) according to the meter on the tuner (which I've never checked for accuracy).

The one I borrowed didn't have the cw card so I don't know how that works. My concern would be the bandpass of the receiver. I think the card only affects the transmit section.

For ssb it works quite well.

73, Paul K1CGZ Wiscasset,
Maine

Date: Mon, 29 Sep 1997 08:25:48 -0500
From: "Jeff M. Gold" <jmg@tntech.edu>
To: QRP-L <qrp-l@Lehigh.EDU>
Subject: [27640] self-contained portable paddles
Message-ID: <342FAC5C.E8457C37@tntech.edu>

MIME-version: 1.0
Content-type: text/plain; charset=us-ascii
Content-transfer-encoding: 7bit

Good morning.

Well had some free time Sunday. I felt like tinkering, but didn't feel like any big projects. Started looking around for what I could mess with. Found I had an extra Tick II keyer kit. Also had an extra computer 2 button mouse.

I am always looking for "rugged" keyer/paddle combos. After putting all the pieces on the work bench, I determined that it should be possible to build the Tick II (or K1EL for that matter) keyer into the mouse and still have room for a 9 volt battery. I took some clippers and cut down the mouse inners (don't worry .. no blood) I left only the part of the circuit board that held the 2 micro switches and had the holes to keep it in place once the mouse goes back together. I was too lazy to trace out the micro switch wires, so just soldered directly from the switches to the connector, come to think of it, didn't need to do that, All I really needed to do was wire a common wire between one contact for ground and then use the remaining one on each switch for dits or dashes.

I took the clippers and clipped out some of the plastic inside of the paddles. The keyer board will be held in place by one of the screws that holds the bottom part of the mouse together. Looks like everything will fit nicely. Light weight, self-contained and rugged. It will be for sale as soon as I get it finished.

My next project is going to use the Kitano? type arrangement where you take two micro switches and press down using paddles instead of in.

72

Jeff, AC4HF

--

Jeff M. Gold, Manager
Academic Computing Support
Tennessee Technological University
(615)372-3979

Date: Mon, 29 Sep 1997 08:36:04 -0500
From: "Jeff M. Gold" <jmg@tntech.edu>
To: QRP-L <qrp-l@lehigh.edu>
Subject: [27641] Tick II-K1EL
Message-ID: <342FAEC4.5D6BC5A4@tntech.edu>

MIME-version: 1.0
Content-type: text/plain; charset=us-ascii
Content-transfer-encoding: 7bit

I will start with a disclaimer. I have (2) Tick II keyers, and (1) K1EL, both bargains.

I think this comment is not really close_

>Hey Gang,

>

>Thought some of you might be interested. I posted a message about two
>weeks ago about the keyer. Well I got mine and put it together in a snap.
>All you need is the 8 Pin keyer chip, .01uF cap, a 4.7K resistor, a 2N2222
>, a momentary switch, and a very little piezo transducer (if you want side
>tone separate from rig) and you are in business. This thing is great.
>Comes preprogrammed with your callsign and favorite speed. Both can be
>changed. It even has a programable memory. All this in a little eight pin
>chip. Offered by K1EL and his site has a great description of the unit.
>Take a look at:

>>Looks like a copy of the TiCK 2 keyer.0

They are both small inexpensive keyers on chips, The Tick II can be purchased with a very small circuit board and all parts, the K1EL can't, but it just uses VERY common parts, and the ones you don't have are readily available at RS.

I much prefer the K1EL, it turned out to be cheaper and for MY use, better designed. With the Tick II, I don't like the way the memory functions, and I have found there really isn't enough memory for my needs.

The K1EL, you figure out the default settings YOU prefer, and the \$6 chip comes ready to roll the way you have designated, with your call sign already programmed and the most common memory messages already in. There is a short user message which is all you should need for contests in combination with the messages already programmed. I found for my thinking the Tick II was programmed backwards. The first press of the button gets you to command functions you have to hold the button to CQ. I like to press the button and have it send CQ.. most common function I use.. very rarely need to mess with other stuff.. but even if you do, it is very easy and intuitive on the K1EL. Another difference is the way the memory works. with the Tick II, the spacing of the final message comes out the way you program it in.. can take several tries. With the K1EL, the functions give a dit between letters and a double dit between words.. the end result is a very good output signal.. very smooth and properly spaced.. only other keyer I have seen that seems to help you send better in this manner was the Idiom press.. which is substantially

more expensive.

Just my two cents.. I have obviously spent a good amount of time playing with these .. both are GOOD.. want that to be clear.

72

Jeff, AC4HF

--

Jeff M. Gold, Manager
Academic Computing Support
Tennessee Technological University
(615)372-3979

Date: Mon, 29 Sep 1997 08:54:15 -0500
From: kreinbd@ccgate.dl.nec.com (David Kreinberg)
To: qrp-1@Lehigh.EDU
Subject: [27642] CONTESTING - TNX
Message-ID: <0001A434.4159@ccgate.dl.nec.com>
Mime-Version: 1.0
Content-Type: text/plain; charset=US-ASCII
Content-Transfer-Encoding: 7bit
Content-Description: cc:Mail note part

Gang,

Many thanks for all the fine answers/comments to my questions on contesting/dupe sheets, etc.

A lot to learn, but a lot of fun, too. I'll be preparing myself for contest season.

73 de Dave NR3E/5
nr Dallas, TX
qrp-1 #25, Winner:1997 Texas QSO Party, QRP
WIMPS: Qs=065 30m=046 17m=13 12m=06 States=028/06/04
DX=03/03/02

Date: Mon, 29 Sep 1997 10:03:23 -0400

From: "Kevin F. Glynn" <kfglynn@prodigy.net>
To: "LIQRP" <liqrp@waterw.com>, "Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>, <cereste@myapc.com>
Subject: [27643] Re: MFJ-9420 -Reply
Message-ID: <199709291400.KAA38076@pimout1-int.prodigy.net>
MIME-Version: 1.0
Content-Type: text/plain; charset=ISO-8859-1
Content-Transfer-Encoding: 7bit

Hi Paul and gang,

I just put in the CW board. A pain to mount on the pins that for sure. Also the bandpass is way too wide for CW, almost like listening to a DC receiver. I also have to adjust the break-in. I bought it for casual use. It was tough going during QRP Afield on 20M with this setup. Finally used my friend's IC-706 to make a few 20M QSOs.

72 Kevin N2TO
Brooklyn, NYC
kfglynn@prodigy.net

Date: Mon, 29 Sep 1997 10:51:29 -0400 (EDT)
From: "Scott Rosenfeld [NF3I]" <ham@w3eax.umd.edu>
To: qrp-1 <qrp-1@Lehigh.EDU>
Subject: [27644] VK3 piling into W3-land this morning on 30m
Message-ID: <Pine.LNX.3.95.970929104226.2988A-100000@w3eax.umd.edu>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

1200z, 10.112, a VK3 working folks all over the East Coast. He was peaking S9, running a Scout @ 30w to a 2 element quad.

If he hadn't had hundreds of people calling him, as well as a tendency to ragchew, a contact would have been a certainty.

In addition, anyone work 3B8FG (Mauritius) on 10.106 last night? I had a 25-mile ride home, and was calling him the whole time with no luck :(

The bands are DEFINITELY looking up!

* Scott Rosenfeld NF3I Burtonsville, MD FM19mc QRV 80-10/6/2/440 *
*** 6m 80 grids worked on 8 watts *** HF 140 cfmd * QRP-L #147 ***
** QRP ARCI #9054 ** DXCC/WAS/WAC *** 100% dipole powered HF/6m **
*** 301-549-1022 h / 301-982-1015 w ** Life is one big hamfest ***

Date: Mon, 29 Sep 1997 08:02:18 -0700 (PDT)
From: David Feldman <dgf@netcom.com>
To: qrp-1@lehigh.edu
Subject: [27645] American States Electronics Mini-Mitter II
Message-ID: <199709291502.IAA05184@netcom5.netcom.com>

This 75 meter SSB hand-held followed me home from the sunday swapmeet. I seem to recall seeing an ad for one back in the 70s in 73 magazine or somewhere. Does anyone remember it? Does anyone have any info on it - perhaps documentation? It is VFO receive, crystal controlled transmit, and looks like a gigantic, 60's era CB hand-held.

Thanx,

73 Dave WB0GAZ dgf@netcom.com

Date: Mon, 29 Sep 1997 08:32:12 -0700
From: Ken Lopez <kjlopez@earthlink.net>
To: QRP-1 <QRP-1@Lehigh.EDU>
Subject: [27646] Telegraphic Codes
Message-ID: <342FCA0A.5680@earthlink.net>
MIME-Version: 1.0
Content-Type: text/plain; charset=iso-8859-1
Content-Transfer-Encoding: 8bit

Hi Gang,

This was sent to me by Ron Steinberg, K9IKZ. I hope this will clear up some of the questions about Q codes that continue to surface here with regularity.

Cheers,
Ken, N6TZV

TELEGRAPHIC CODES OF MORSE AND MEN
by Kenneth Brown GOPSW

The first line telegraph message is thought to have been sent from Washington to Baltimore in May 1844 by Samuel Finley Breeze Morse, (1791-1872). He is said to have tapped out the message, "What hath

God wrought?" using a code of interrupted signals which he and his associate Alfred Louis Vail, (1807-1859), had developed some years earlier. After this momentous achievement and following the founding of Western Union in 1856, coast to coast telegraph lines were quickly installed and it then became commercially possible to send and receive telegraphic traffic by line.

Since then and with an eye on faster speeds of transmissions and higher accuracy, newspapers, railways and post offices made great use of the telegraph to provide their customers with speedy, economic, personal and commercial communication. This also paved the way for transmitting traffic by radio from the late 1890s following successful experiments by Marconi.

One way of speeding the flow of traffic was to operate an agreed set of short codes to replace well-known sentences or phrases but at that time there was no common national or international standard. The first of many conferences to discuss and try to resolve this issue was held in the US in April 1857, culminating with the release of the National Telegraphic Review and Operators' Guide. This Guide makes the first authentic reference to the well-known greeting 73; at that time meaning love and kisses. 'Later editions kept this definition but, as time went by, the meaning of 73 changed from a Valentine type of greeting to a vague sign of operators' fraternalism.

Western Union, in 1859, set up the Standard 92 Code. Replacing common sentences and phrases with selected numbers between 1 and 92 the message was telegraphed to a distant station. At the distant end the numbers were decoded and a plain language version delivered to the recipient. The definition of 73 changed yet again to a very flowery accept my compliments. From 1859 to 1900 the many telegraphic manuals show variations of this meaning. Each major telegraph and railway company had its own distinctive telegraphic codes. Since there was no agreed standard all were different and, as a consequence, there was much confusion in communicating with different networks. During this time there were even two alphabetical morse codes the American and Continental (European) versions. Although there were basic similarities there were also some major differences. This, combined with the multiplicity of telegraphic codes, caused confusion and made communication with and between US establishments particularly difficult.

The US 1908 Dodge's Manual gives today's definition of 73 best regards. Other Dodge numbers were 88 love and kisses, 55 lots of success and 99 get lost (probably unofficial).

Also, in 1908, the British Post Office, despairing of action to agree an

international code of abbreviations, issued its own list of two letter abbreviations intended for use between British coast stations and ships. The list, published in the PMG's Instructions to Wireless Telegraphists, included abbreviations RA to RZ and SA to SF. The next International Radiotelegraphic Convention, held in London in July 1912, adopted and extended the GPO abbreviations. Q was added as the first letter and so the Q code was born. The new code now ran from QRA to QRZ and QSA to QSX. On 1st July 1913 the Q code finally became an official international information code, updated as changing circumstances demanded to include new codes relating to such matters as aviation and maritime.

Some time later came the Z code, running in parallel with the Q code. This originated as a company code of Cable and Wireless with application limited, in the main, to high speeds machine morse operating at speeds of typically 120wpm. Widely used by many countries, including Germany, the Q code and Z code continued in use throughout the war. After the war high-speed morse became less widely used and was replaced by other forms of traffic communication such as RTTY and facsimile. The Z code, therefore, gradually went out of fashion and slowly disappeared. Examples of the Z code include ZAA you are not observing circuit discipline, ZAN we can receive absolutely nothing, ZST send slips twice, ZAP acknowledge please and there were lots of others.

Operating during the 1930s and early 40s, at the same time as the Z and Q codes, was the X code, then in use by European military services as a wireless telegraphy code. This consisted of the letter X followed by a number. For example X34 meant your morse is bad, X50 your morse is good, X100 affirmative, X112 interrogative, X279 what is the strength of my signal? X496/257 I am winding in my aerial prior to landing/i have nothing further for you.

The X code continued in use with the forces until 1942 when, at the insistence of the US military, it was replaced by the Q code. However, the odd X code can still be heard from veteran telegraphists even now but not very often.

So the Q code became the standard international military and civil telegraphic letter code used in CW communication. (Sometimes, incorrectly, even in R/T). Published as an operators' manual, there are separate sections available to deal with various areas of communication. Some less well known examples of the Q code used by base stations of the British Army included QAU followed by QHU, meaning I am waterlogged, I am about to jettison fuel; AS5 generally followed! Even less well known is QGG send the pony by the next train.

Widely used by radio amateurs operating CW, today's Q code has slightly different meanings but is still very similar to the 1912 version.

One of the great benefits of using the Q code is the pleasure in being able to communicate with overseas operators who may not be fluent in the English language.

In conclusion, it is sad fact there will be no successor to the Q code; no longer is the morse code taught to budding telegraphists, except to the favoured few specialist Aldis lamp operators in the Royal Navy. Data stream transmissions have displaced morse and taken over everyday communication such is the march of time.

Acknowledgements: Grateful thanks to Pat Hawker G3VA and Peter Broom G5DQ, for their help and advice.

Ron Steinberg K9IKZ rhstein@interaccess.com
 512 S Cherry Itasca Il 60143
 630 773 3583 hm 630 773 0822 hm fax

At work: rentcom@mcs.com http://www.rentcom.com
 847 678 7000 wk 847 678 9378 wk fax

Date: Mon, 29 Sep 1997 11:35:38 -0400
From: rerobins@unccvm.uncc.edu (Rick Robinson)
To: qrp-l@Lehigh.EDU
Cc: kd1jv@moose.ncia.net
Subject: [27647] Bench safety
Message-ID: <v02130502b0553ff3c738@[152.15.144.13]>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Steve, KD1JV, writes:

>A wise Electronics tech or Electrician does not have any metal on thier
>fingures or wrists !

Great advice!! The *first* thing we were taught in USAF Tech School, at Keesler AFB, was to take off all rings, watches, bracelets and any jewelry that could give you a shock while working on gear. I saw a fellow tech,

not in the USAF, get across 117VAC with a metal watchband once. His wrist and the watchband were not a pretty sight afterwards. I even take off my plastic watch when I work on gear and even keep one hand in my pocket when I'm around high voltage. One of the famous hams of the '30s was killed while working on gear with metal headphones on. You just can't be too careful folks.

Don't do like I've done and leave the wedding band on the bench. When you get home and the XYL notices it missing, telling her you take it off to work on equipment can sound kinda lame. :^) This can be more of a hazard to your health than getting shocked.

72,

Rick kf4ar

Date: Sun, 28 Sep 1997 21:55:07 edt
From: w8lrm@juno.com (Albert K. Rea)
To: qrp-1@lehigh.edu
Subject: [27648] Thanks
Message-ID: <19970928.221800.10239.0.w8lrm@juno.com>

Got several replys to my request for HWA-7-1 supply. Thanks to all. The unit I got was wired for 220. Re-wired it last night and its working fine.

de....

Al W8LRM
St Joseph, Michigan
on Michigans Sunset Coast

Date: Mon, 29 Sep 1997 09:29:14 -0700
From: "Michael A. Gipe" <mgipe@reliablemeters.com>
To: <vole@primenet.com>, "Low Power Amateur Radio Discussion" <qrp-1@lehigh.edu>
Subject: [27649] Re: AB7TT Attacked by Javelinas, Fox Escapes
Message-ID: <199709291628.LAA07803@multi13.netcomi.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=ISO-8859-1
Content-Transfer-Encoding: 7bit

Joe wrote:

> ...No sign of Chuck, but I *did* hear Harvey (N6MM) talking
> about Chuck and Fox conspiracies on 7.039. Figured I'd
> tailend 'em and get the scoop. Fired off a "de AB7TT"
> and it sounded like Harvey came back, but I'll never
> know for sure. My rig freaked. Random dits and dahs all
> over. Possessed, it was. By spastic spirits with sloppy
> fists. Last I heard was someone sending "Joe?" before
> all heck broke loose. :-(...

That was me, Joe. While searching around for the Chuckmeister, I came upon Harvey working just about everybody on QRP-L, so I gave him a call. We commiserated a bit, and I put forth the theory that Chuck was sitting at home smiling while he tricked everyone into getting on the air. We signed and started to return to the search, when I heard your call. Just as I replied, you started to send some strange stuff. It sounded almost coherent -- I thought maybe Nils' spirit had taken over your rig -- so I asked, "Joe?", but, alas, you never recovered. Sorry I missed chatting with you.

In spite of missing Chuck, Friday's exercise was useful, since I got to practice tuning with the 50 and 100 Hz DSP filters in preparation for the Fox hunts. I found that I could actually separate a weak CW signal from between the two tones of an S9 RTTY signal! Can't wait for Tuesday!

Mike K1MG

Date: Mon, 29 Sep 1997 12:41:20 -0400 (EDT)
From: "Scott Rosenfeld [NF3I]" <ham@w3eax.umd.edu>
To: George Gingell <k3tks@abs.net>
Cc: Maryland Milliwatt Club -- Paul Stroud <aa4xx@ipass.net>, Chuck Adams <adams@sgi.com>, "Gil Kost (The American QRP Key Mfg Co.)" <ahber@ix.netcom.com>, Rich Bachmann <bachmann@ari.net>, Ben Schultz <benjamin@w3eax.umd.edu>, Bob White <bobwhitewo3b@geocities.com>, ccart@dns.vidtel.com,
Subject: [27650] Maryland Milliwatts callsign
Message-ID: <Pine.LNX.3.95.970929123559.3426E-100000@w3eax.umd.edu>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

In looking at these calls available...

KQ3RP

WQ3RP

etc.

my favorite is STILL K3MMW (Maryland MilliWatts). Easy to speak via phone, snappy via CW. KQ3RP is awkward, just like the word "awkward."

"Kilo Quebec Three Romeo Papa"

dadidah dadadidah didididadah didadit didadadhit

"Kile Three Mike Mike Whiskey"

dadidah didididadah dadah dadah didadah

It's shorter and snappier, and perfectly fits

Maryland MilliWatts

* Scott Rosenfeld NF3I Burtonsville, MD FM19mc QRV 80-10/6/2/440 *
*** 6m 80 grids worked on 8 watts *** HF 140 cfmd * QRP-L #147 ***
** QRP ARCI #9054 ** DXCC/WAS/WAC *** 100% dipole powered HF/6m **
*** 301-549-1022 h / 301-982-1015 w ** Life is one big hamfest ***

Date: Mon, 29 Sep 1997 13:06:42 -0400
From: Ken Freedman <n1qqv@cshore.com>
To: qrp-l@lehigh.edu
Subject: [27651] Bench Safety
Message-ID: <3.0.32.19970929130534.007ab8e0@cshore.com>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Hi Gang,

An excellent point has been made about jewelry and high voltages. Not only should you not have metal on your hands when working with high voltage, but when working with any power source capable of delivering more than a few milliamps. Many computer power supplies, low voltage supplies that we use in the hamshack and almost any battery (automotive batts and nicads are REALLY tough) can deliver high current for some period of time.

You could find yourself wearing a red-hot ring or watchband.

I've seen it happen.

73, Ken

Ken Freedman

AKA: N1QQV/QRP VE, EC Madison CT, QRP-L

Living Proof That, "You don't have to be a blonde to be light headed!"

Date: Mon, 29 Sep 1997 10:06:46 -0700
From: Ed Loranger <we6w@qsl.net>
To: Low Power Amateur Radio Discussion <qrp-l@lehigh.edu>
Subject: [27652] qsl.net server down or something.
Message-ID: <342FE026.70F4@qsl.net>
Mime-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Qrp-l gang. I'll be unreachable, I guess.

Have received no mail since Friday and expect qsl.net
server is down. Can't access my webpage their either.

So, don't know what's happening in the world without my
qrp-l!

I'll check the archives if I get a chance.

Best Regards,
Ed Loranger
--

72/73 de we6w qrp es cw ONLY (From non-ham to extra in one day!)
HW-8;OHR-100, Pixie2, Johnson Viking II w/VF0.
QRP-L#1068/ARCI#9397/Norcal#2227/ARS#275/AR#112 grid CM88ok
mailto:we6w@qsl.net <http://www.qsl.net/we6w>

Date: Mon, 29 Sep 1997 13:35:15 -0400 (EDT)
From: "Scott Rosenfeld [NF3I]" <ham@w3eax.umd.edu>
To: Low Power Amateur Radio Discussion <qrp-l@lehigh.edu>
Subject: [27653] Md Milliwatts
Message-ID: <Pine.LNX.3.95.970929133421.3426H-1000000@w3eax.umd.edu>
MIME-Version: 1.0

Content-Type: TEXT/PLAIN; charset=US-ASCII

Whoops...darned e-mail program threw the list into the mailing list.

Sorry folks. My note was quite obviously intended for the MD
milliwatters.

* Scott Rosenfeld NF3I Burtonsville, MD FM19mc QRV 80-10/6/2/440 *
*** 6m 80 grids worked on 8 watts *** HF 140 cfmd * QRP-L #147 ***
** QRP ARCI #9054 ** DXCC/WAS/WAC *** 100% dipole powered HF/6m **
*** 301-549-1022 h / 301-982-1015 w ** Life is one big hamfest ***

Date: Mon, 29 Sep 1997 12:21:52 -0500
From: "Bruce Barley" <lbbbarley@feist.com>
To: <qrp-l@lehigh.edu>
Subject: [27654] Kansas Flea Market/ ARRL Convention
Message-ID: <199709291732.MAA06964@wichita.fn.net>
MIME-Version: 1.0
Content-Type: text/plain; charset=ISO-8859-1
Content-Transfer-Encoding: 7bit

The Kansas ARRL State Convention / Flea market is scheduled for Saturday,
October 4 at the Century II Convention Center, Wichita, KS. The location
is in the heart of downtown Wichita - on Douglas St. at the Arkansas river.
Just look for the building which looks like a big cheeseburger (hold the
onions).

There will be an on-site flea market. Hours 8am - 4pm.

ARRL VE testing session at 1pm - bring your original license + 1 copy, and
a photo ID.

Talk-in on 146.22/82

For further info. contact: Sonjia Cowart-Clover N0TYV (316) 284-0262
(Newton, KS.)

If I can escape from work, I'll let you know what qrp gear showed up, and
the prices...

Bruce Barley KB0PZD qrp-l #69
lbbbarley@feist.com

> Steve, KD1JV, writes:

>

> A wise Electronics tech or Electrician does not have any metal on thier
> fingures or wrists !

>

Don't forget to take a good heapin' helpin' of electrical tape to your metal tools. I got a whole drawer of screwdrivers, socket sets etc. at work all covered in tape because I have had to use them in "Hot" power boards (200+ amps at -48v dc) looks bad works good.

Erin Scott KK7GE

ekscott@ibm.net

KK7GE@N7UVH.#NID.ID.USA.NOAM

"Life's too short to ride an ugly horse"

Date: Mon, 29 Sep 1997 16:16:31 -0700

From: Harvey Hetland <n6mm@earthlink.net>

To: QRP-L@lehigh.edu

Cc: K1EL@aol.com

Subject: [27657] Option on K1EL K8 keyer.

Message-ID: <343036CF.20FE@earthlink.net>

MIME-Version: 1.0

Content-Type: text/plain; charset=us-ascii

Content-Transfer-Encoding: 7bit

The following response was received from K1EL regarding the pre-programmed messages in the K8 keyer. He asked that I post the information to the QRP-L, since it is not yet on his web site. I wrote:

<<The K8 keyer on your web site appears very attractive, but I am surprised at the programming of the messages. Especially during contests one would not usually end a transmission with both the prosign AR and the prosign K back-to-back. I would suggest that the AR prosign be deleted.>>

He responded with:

Harvey, I have received many inquires on this subject and now will be offering an alternate message list aimed more at the tester:

CQ: CQ CQ CQ DE K1EL K1EL K (as before, no AR)

DX: CQ CQ CQ DX DE K1EL K1EL DX K

TST: TEST K1EL K1EL TEST

CT: (Message) DE K1EL K1EL K (allows CQ CQ FD DE K1EL K)

MSG: User programmed 15 chars (as before)

If you would like this set just make a note on your order sheet.
I have to add this to the web site, I wonder if you could post this
to the QRP-L list ? I currently am unable to access it.

72 de Steve K1EL

For more information his web site is located at

<http://members.aol.com/k1el/index.html>

You can contact Steve, K1EL, at K1EL@aol.com if you have questions,
since I have no financial or business connection with the K8 keyer.

73, Harvey, N6MM.

Date: Mon, 29 Sep 1997 10:36:49 -0700 (MST)
From: Joe Gervais <vole@primenet.com>
To: ham@w3eax.umd.edu
Cc: qrp-l@Lehigh.EDU
Subject: [27658] Re: Maryland Milliwatts callsign
Message-ID: <199709291736.KAA22094@usr03.primenet.com>

Howdy,

Scott (NF3I) wrote:

>

> my favorite is STILL K3MMW (Maryland Milliwatts). Easy to speak via
> phone, snappy via CW. KQ3RP is awkward, just like the word "awkward."

Yeah, but K3MMW is Maryland Megawatts. You'd have to send
K3MmW, and you know what a hassle it can be to send the QCL
(Caps Lock) code in the middle of your call. ;-)

Actually you might find KQ3RP is amazingly easy to send in
CW. Let's face it - anyone on this List can probably send
the sequence 'QRP' on nothing more than spinal reflexes. :)
All you have to do is remember to stick a '3' in there. And
for QRP contests, the letters 'QRP' anywhere near each other
really seem to stick out. Another basal brain response, no
doubt. Wow, maybe the Borg and QRPers have alot more in
common than we thought. :)

Good luck with the QRP DX Mobile, Scott!

Cheers de AB7TT,

-Joe, vole@primenet.com, AZ ScQRPions (Phoenix)

"I am Homer of Borg. Resistance is futile. You will be... Ooo! Donuts!"

Date: Mon, 29 Sep 1997 13:51:02 -0400
From: "Watson R Gabriel Jr" <wgabriel@duke-energy.com>
To: qrp-1@Lehigh.EDU
Subject: [27659] Tick II-K1EL
Message-ID: <85256521.0061690E.00@dpcmail.dukepower.com>
Mime-Version: 1.0
Content-type: text/plain; charset=US-ASCII

And to add what Jeff said - from everything I have researched so far, you can take a K1EL chip and plug it in as a direct replacement on the TiCK PWB. Pin connections are equivalent. I have not tried this yet but hope to soon do so.

Have been thinking of designing up a tiny "universal" PWB that could be used with either device, with some choices on how power is supplied, etc so a person could "customize" it for his/her application. Then wondered if FAR would be interested in producing PWBs for sale. Wonder if there would be any interest in something like this?

Watson/WB4EXW

----- Forwarded by Watson R Gabriel Jr/Gen/DukePower on
09/29/97 01:44 PM -----

They are both small inexpensive keyers on chips, The Tick II can be purchased with a very small circuit board and all parts, the K1EL can't, but it just uses VERY common parts, and the ones you don't have are readily available at RS.

72
Jeff, AC4HF

Date: Mon, 29 Sep 1997 10:51:55 -0700 (PDT)
From: Jim W7LS <w7ls@brigadoon.com>
To: qrp-l@Lehigh.EDU
Subject: [27660] Silver contacts about to ship out
Message-ID: <199709291751.KAA15426@k2.brigadoon.com>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Hi, gang. I'm going to ship out the contacts in about 2 days from now. Who I send to will depend only on who I've received mail from, because my ridiculous internet service provider has goofed up my mail and I lost about the last three months of my mail <GRRRR.....>

In other words, I only know who wants them, based on who I got mail from. I'll wait 2 more days for mail to get in and then send them out. If you are just now finding out about the contacts, don't worry. I'll make another set available in a few weeks. I'll announce it here.

Gotta run. 73 de Jim, W7LS

Date: Mon, 29 Sep 1997 13:59:40 -0400
From: Ed Tanton <n4xy@bellsouth.net>
To: QRP-L Reflector <qrp-l@lehigh.edu>
Subject: [27661] jewelry & electronics
Message-ID: <3.0.1.32.19970929135940.00a55c00@mail.atl.bellsouth.net>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

One of the scariest things about the 9V NEDA package nicad batteries that were available for a while (may still be for all I know) was the thought of getting a ring across those terminals. The ESR of nicads is so low, that what you would have, likely as not, would be an instant spot-weld, and the at-least-near-removal of the associated ring finger. Being fully cauterized as it went, at least it wouldn't bleed much. There's no place for jewelry around things shortable.

At 01:06 PM 9/29/97 -0400, Ken Freedman wrote:

>Hi Gang,

>

> An excellent point has been made about jewelry and high voltages.

>Not only should you not have metal on your hands when working with high
>voltage, but when working with any power source capable of delivering
>more than a few milliamps. Many computer power supplies, low voltage
>supplies that we use in the hamshack and almost any battery (automotive
>batts and nicads are REALLY tough) can deliver high current for some
>period of time.

>

> You could find yourself wearing a red-hot ring or watchband.

>

> I've seen it happen.

>

>73, Ken

>

>

>Ken Freedman

>AKA: N1QQV/QRP VE, EC Madison CT, QRP-L

>Living Proof That, "You don't have to be a blonde to be light headed!"

>

>

>

>

72/73 ZUT!!!

Ed Tanton N4XY EMAIL: n4xy@bellsouth.net

189 Pioneer Trail

Marietta, GA 30068-3466

TEL: (770)579-3933 V/MBX/FAX

QRP-ARCI #7663

G-QRP #6779

OK-QRP #172

QRP-L #758

AdvRC #140

NORCAL #1779

NCDXF

SEDXC

Life Member:

ARRL

AMSAT

INDEXA

QCWA

INTERESTS: DX QRP BoatAnchors Test Equipment Photography

CW: 99.9% QRP: 95-100% (Mood swings!) Mercury Paddle #0214

~~~~~  
"Think you can, think you can't: either way you're right!"

Henry Ford

~~~~~

Date: Mon, 29 Sep 1997 18:23:30 -0700

From: Harvey Hetland <n6mm@earthlink.net>

To: qrp-l@Lehigh.EDU

Subject: [27662] Option on K1EL K8 keyer. (2nd try)

Message-ID: <34305492.1727@earthlink.net>

MIME-Version: 1.0

Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

The first posting has not appeared after two hours. Please pardon the "bandwidth" if this turns out to be an unnecessary repeat. - N6MM

The following response was received from K1EL regarding the pre-programmed messages in the K8 keyer. He asked that I post the information to the QRP-L, since it is not yet on his web site. I wrote:

<<The K8 keyer on your web site appears very attractive, but I am surprised at the programming of the messages. Especially during contests one would not usually end a transmission with both the prosign AR and the prosign K back-to-back. I would suggest that the AR prosign be deleted.>>

He responded with:

Harvey, I have received many inquiries on this subject and now will be offering an alternate message list aimed more at the tester:

CQ: CQ CQ CQ DE K1EL K1EL K (as before, no AR)
DX: CQ CQ CQ DX DE K1EL K1EL DX K
TST: TEST K1EL K1EL TEST
CT: (Message) DE K1EL K1EL K (allows CQ CQ FD DE K1EL K)
MSG: User programmed 15 chars (as before)

If you would like this set just make a note on your order sheet. I have to add this to the web site, I wonder if you could post this to the QRP-L list ? I currently am unable to access it.

72 de Steve K1EL

For more information his web site is located at
<http://members.aol.com/k1el/index.html>

You can contact Steve, K1EL, at K1EL@aol.com if you have questions, since I have no financial or business connection with the K8 keyer.

73, Harvey, N6MM.

Date: Mon, 29 Sep 1997 11:42:26 -0700 (PDT)
From: Monte Stark <ku7y@sage.dri.edu>
To: Ken Freedman <n1qqv@cshore.com>
Cc: Low Power Amateur Radio Discussion <qrp-l@Lehigh.EDU>
Subject: [27663] Re: Bench Safety

Message-ID: <Pine.SUN.3.90.970929113650.27545B-1000000@vortex>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

Hi All,

Let me inject one more thought.....

I agree with what has been said. But please add to that the dangers of working with rings and watches when doing things like tower work.

Or anything else that can cause something to bang against your ring and force you to have to cut it off!

I have cut off two rings while working in the oil fields. Neither was on my finger but the owners of the fingers under disscision sure made lots of noise!!

Another accident I have seen is for someone to either slip or jump down from a step and have a ring catch on something and hold them in the air! Fingers have even been removed this way!!

So whenever your working, get those rings and watchs off.

I even lost my first wedding band, but I still have all my fingers!

cul,

73, Ron, SOWP 5545M,

.....KU7Y.....ARCI #8829.....Monte "Ron" Stark.....
....ku7y@sage.dri.edu.....Washoe Lake, Nevada....
....QRP-L #17...ARS #49...NorCal #330.....NRA LIFE.....

Date: Mon, 29 Sep 1997 15:49:58 -0400 (EDT)
From: Chris Cartwright <ccart@dns.vidtel.com>
To: Harvey Hetland <n6mm@earthlink.net>
Cc: Low Power Amateur Radio Discussion <qrp-l@Lehigh.EDU>
Subject: [27664] Re: Option on K1EL K8 keyer. (2nd try)
Message-ID: <Pine.LNX.3.93.970929154723.1250E-1000000@dns.vidtel.com>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

On Mon, 29 Sep 1997, Harvey Hetland wrote:

> The first posting has not appeared after two hours. Please pardon the
> "bandwidth" if this turns out to be an unnecessary repeat. - N6MM

Harvey,

You're pardoned :) It is a repeat so you might want to check things on
your end. Seems like the first one came through about an hour ago, but
I'm guessing. I've had some get delayed for about four hours on
occassion, no clue why. Are you getting the other postings? 72

```
-- Chris Cartwright,   Technical Engineer   |       ccart@vidtel.com       --  
-- N3XRV      ARRL-VE   QRP WAS 20/10(w/c)   |       ccart@erols.com       --  
-- QRP-L #655 NORCAL #1891 QRP-ARCI #????? | http://dns.vidtel.com/~ccart --  
-- WIMPS Q's=05 30M=04 17M=01 12M=00 STATES=03/00/00 DX=00/01/00 QSL's=03 --
```

Date: Mon, 29 Sep 1997 14:58:50 -0400
From: BWHITEM@mailgw.sanders.lmco.com
To: qrp-l@Lehigh.EDU
Subject: [27665] origional morse code?
Message-ID: <430039A0.1299@mailgw.sanders.lmco.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=US-ASCII
Content-Transfer-Encoding: 7bit
Content-Description: cc:Mail note part

does anyone know how to get the origional morse code? i have
seen it before, i thought in an old arrl handbook but dont
seem to find it in any of them now. thanks
barry whittemore
wb1ledi

Date: Mon, 29 Sep 1997 15:55:02 -0400 (EDT)
From: Chris Cartwright <ccart@dns.vidtel.com>
To: QRP Reflector <qrp-l@Lehigh.EDU>
Subject: [27666] Re: Bench Safety
Message-ID: <Pine.LNX.3.93.970929155027.1250F-1000000@dns.vidtel.com>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

On Mon, 29 Sep 1997, Monte Stark wrote:

> I even lost my first wedding band, but I still have all my fingers!
Me too! And the EX-XYL went with it <grin>

ObQRP:

Worked NN50CIA on 14.027 last night at about 0100z, I think they will only be on the air until tomorrow. Go get 'em. Anyone know what their card looks like yet? Or is it a "secret" :)

```
-- Chris Cartwright,   Technical Engineer   |       ccart@vidtel.com       --  
-- N3XRV      ARRL-VE   QRP WAS 20/10(w/c)  |       ccart@erols.com       --  
-- QRP-L #655 NORCAL #1891 QRP-ARCI #????? | http://dns.vidtel.com/~ccart --  
-- WIMPS Q's=05 30M=04 17M=01 12M=00 STATES=03/00/00 DX=00/01/00 QSL's=03 --
```

Date: Mon, 29 Sep 1997 14:36:20 -0400
From: dwayne rich <dritchff@worldnet.att.net>
To: qrp-l@lehigh.edu
Subject: [27667] Norcal 40-9er
Message-ID: <342FF524.5907@worldnet.att.net>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

I know this kit is no longer produced but I was wondering if anyone had a copy of the schematics and parts list available? I would be willing to pay any copying costs.

Dwayne
KC4ADW

Date: Mon, 29 Sep 1997 13:26:22 -0700
From: dgf@netcom.com (David Feldman)
To: qrp-l@lehigh.edu
Subject: [27668] Did you receive 38 special case yet?
Message-ID: <199709292026.NAA09934@netcom9.netcom.com>

Sent off for 38 special and tick kit just after CQ mag article came out, along with the little machined case. Kit and keyer arrived right away, but no case yet. No big rush, just wondered if my situation is unusual.
73 Dave WB0GAZ dgf@netcom.com

Date: Mon, 29 Sep 1997 16:56:56 -0400
From: rerobins@unccvm.uncc.edu (Rick Robinson)
To: qrp-1@Lehigh.EDU
Cc: kb8tnq@voyager.net
Subject: [27669] attached files
Message-ID: <v02130500b0558913f567@[152.15.144.13]>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Fellow qrpers,

Twice in the last few days I've seen posts to this list with attached files. Please understand not everyone has a mail reader that can deal with attached files. Those of us who do have readers that will deal with attached files might not want your file. I'm a little virus shy, myself. Some mail servers might do nasty things with attached files and you'll have some system administrator cursing your very being. If you feel you must send an attached file, please don't do it in a post to the entire list. Find out first who wants the file and send it via private email.

I can tell you from my experience as the computer support person in the Psychology Department at UNCC, attached files are a royal pain in the rear. They cause me a lot of unnecessary grief. I have to support 4 different desktop operating systems, and 3 different mainframe systems. I'll bet we have more than that here on qrp-1.

Let's consider the complexity of a multitude of different systems and operating systems trying to sort out this email mystery before we send attached files.

Now back to your regularly scheduled qrp event.

72/73,

Rick kf4ar

Date: Mon, 29 Sep 1997 21:57:09 +0100
From: adams@chuck.dallas.sgi.com (Chuck Adams)

To: qrp-1@Lehigh.EDU
Subject: [27670] Pre-FOXHUNT EXERCISE
Message-ID: <199709292057.VAA02258@chuck.dallas.sgi.com>

Gang,

Don't forget tonight 0200-0400UTC, starting around 7.035MHz or so, K5FO/QRP will be on to demo how this exercise will work or should work.

I'll be running 2W tonight so that you won't have an additional handicap trying to find me other than the unusual propagation stuff.

cu there

Exchange name, state, rst and qrp-1 number or power level

Chuck Adams K5FO CP-60 adams@sgi.com
<http://reality.sgi.com/adams/index.html>

Date: Mon, 29 Sep 1997 17:00:23 -0400
From: Nick Franco <kf2ph@bnl.gov>
To: liqrp@waterw.com
Cc: qrp-1@Lehigh.EDU
Subject: [27671] LIQRP in the Park, etc.
Message-ID: <343016E7.18CD@bnl.gov>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Hello All,

Long time, no post. I've been in digest mode on qrp-1 and most of the time don't get around to reading it, or I'm several days late. I've missed the qrp-1 chatting. Speaking of chatting, I just install the ICQ program on my work PC to try out for a while. It is a nice little add-on so you can call up and chat with friends. Some of the LIQRP guys were talking about it on Saturday in the Park. You can set up your NickName as your callsign (which is unique), and be call or known by that ID to others. You can receive individual calls and /or chat groups. You can also set up security restrictions, etc. A very nicely presented product.

[Click here to download ICQ](#)

<http://www.mirabilis.com/download.html>

Now or the Fox information. I never even saw any of the announcements about the FoxHunts (my favorite event each year). If someone would be so kind as to forward me the schedule to my personal email address, I would really appreciate it. I've enjoyed the FoxHunts every year since they started so far and don't want to miss out this year. In fact, I still live in the thrills of being the Fox last year. Good Luck to all Foxi and Hunters. CU there. I just need the schedule.

Now - The LIQRP in the Park was fabulous. Tom - AA2VK brought his Wrist Rocket and SpinCast reel. He deadly accurate with that thing too. In no time at all he had Kevin - N2TO's 40 meter dipole up about 40 feet in the trees. Kevin's first FONE contact on the 9420 was an excellent QSO to Slovenia. The gent there sounded like ARRNAALD. He came back all right and to Kevin's single call. He gave him a 59 signal report and told him he was S7 on the meter - I'm still trying to figure that one out. It must be some kind of secret FONE code signal report or something :-)) Kevin went on and off for the afternoon yielding many DX contacts with his 5 Watts PEP rig. Tom was running his OHR Sprint on 40. I hooked up my NW-40 for a few minutes and Jeff - WB5GWB and I enjoyed a couple of Q's. All in all a great afternoon. It's too bad we thought of this park thing so late in the season. I think it could be a great place to meet every time we get together. (Except for the winter) - Unless we have FYBO LIQRP meetings :-)) It could happen.

Well I just had to jump on and let you all know I'm still alive here on LI and missin' all y'all.

Best 72/73 es Happy Hunting

Nick - kf2ph

--

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Date: Mon, 29 Sep 1997 17:02:46 -0400
From: "Bob Kellogg" <ae4ic@nr.infi.net>
To: <ke3fl@juno.com>, "Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>

Subject: [27672] Re: Oops
Message-ID: <199709292145.RAA32320@mh004.infi.net>
MIME-Version: 1.0
Content-Type: text/plain; charset=ISO-8859-1
Content-Transfer-Encoding: 7bit

That's OK, Phil, I made a mistake once myself when I thought I was wrong about something, but I wasn't.

Bob Kellogg, AE4IC, Greensboro, NC
Prolably, but not nececelery. -- Benny Hill

> Seems I didn't read the rules of the game. I apologize to everyone for
> the slip about the code words. I was wondering how one would validated
> after a post. Should've looked at the rules again.
>
> I thank those of you who pointed out my slip in a kind correcting way.
>
> To the others, get a life. We all make mistakes. I was fixing door
> handles, cleaning the garage, building a frame, and trying to listen to
> the test pretty much all at the same time. What, you want me to read
> rules too? :-)
>
> 73 & 72 de KE3FL
> Phil K

Date: Mon, 29 Sep 1997 16:17:31 -0600
From: "Phil, K6LS" <k6ls@amsat.org>
To: ccart@dns.vidtel.com
Cc: Low Power Amateur Radio Discussion <qrp-l@lehigh.edu>
Subject: [27673] Re: Bench Safety
Message-ID: <34301AEB.2A12@amsat.org>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Chris Cartwright wrote:
> Worked NN50CIA
>... Anyone know what their card looks like yet? Or is it a "secret" :)

Actually they can neither confirm or deny that
ANY such contact took place ;-)

--

73 de Phil, K6LS/0
QRP-L #612 NorCal #824
CQC #471 ARCI #8866
k6ls@qsl.net <or> k6ls@amsat.org
DM79or, Arapahoe County, Colorado
ITU zone 7, CQ zone 4
<http://www.qsl.net/k6ls>

Date: Mon, 29 Sep 1997 16:51:48 -0600
From: "Phil, K6LS" <k6ls@amsat.org>
To: pharden@aoc.nrao.edu
Cc: Low Power Amateur Radio Discussion <qrp-l@lehigh.edu>
Subject: [27674] Re: O-SCOPES / Paul Harden
Message-ID: <343022F4.2CD@amsat.org>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

I would like to personally THANK Mr Harden for his excellent contribution to QRP and Amateur radio! (too many to list!)

Mr. Harden has the ability to communicate his vast knowledge at a level most can understand. He has taken subjects that I thought I knew and given a more in-depth, yet simple understanding- truly amazing!

His writtings have inspired me to learn more and to do things I wouldnt even imagine or try to undertake.

I sure hope that someday his writtings will be put into ANOTHER fine book, such as his Electronic Data Book for Homebrewer's and QRP'ers. (I personally cherish my Autographed copy!, I also would recomend you pick one up for yourself)

Thank You Mr. Paul Harden, keep up the good work!

(to our vets- this should ring of: Attention to orders and Above and beyond, ect.. :-)

72/3

--

73 de Phil, K6LS/0
QRP-L #612 NorCal #824
CQC #471 ARCI #8866
k6ls@qsl.net <or> k6ls@amsat.org
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End of QRP-L Digest 863

